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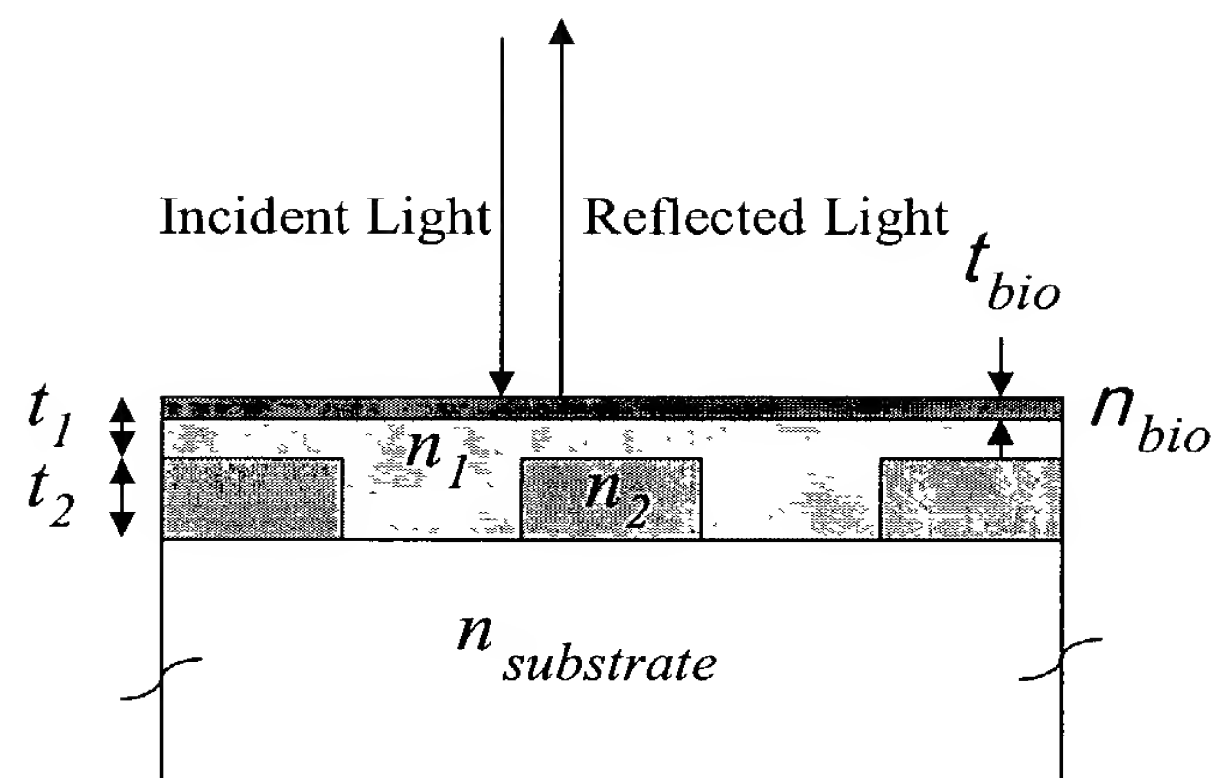


Figure 1 A

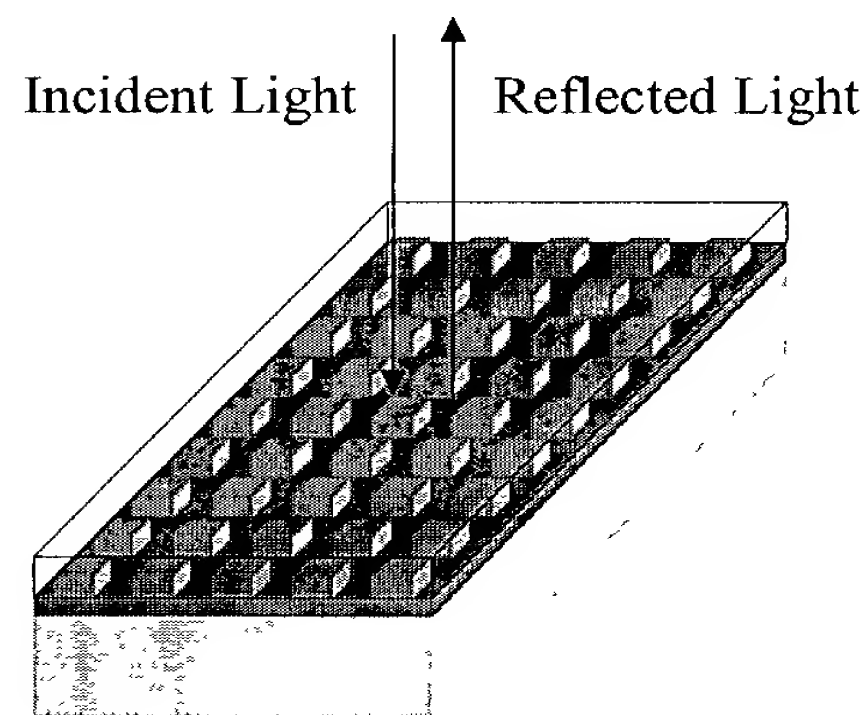


Figure 1 B



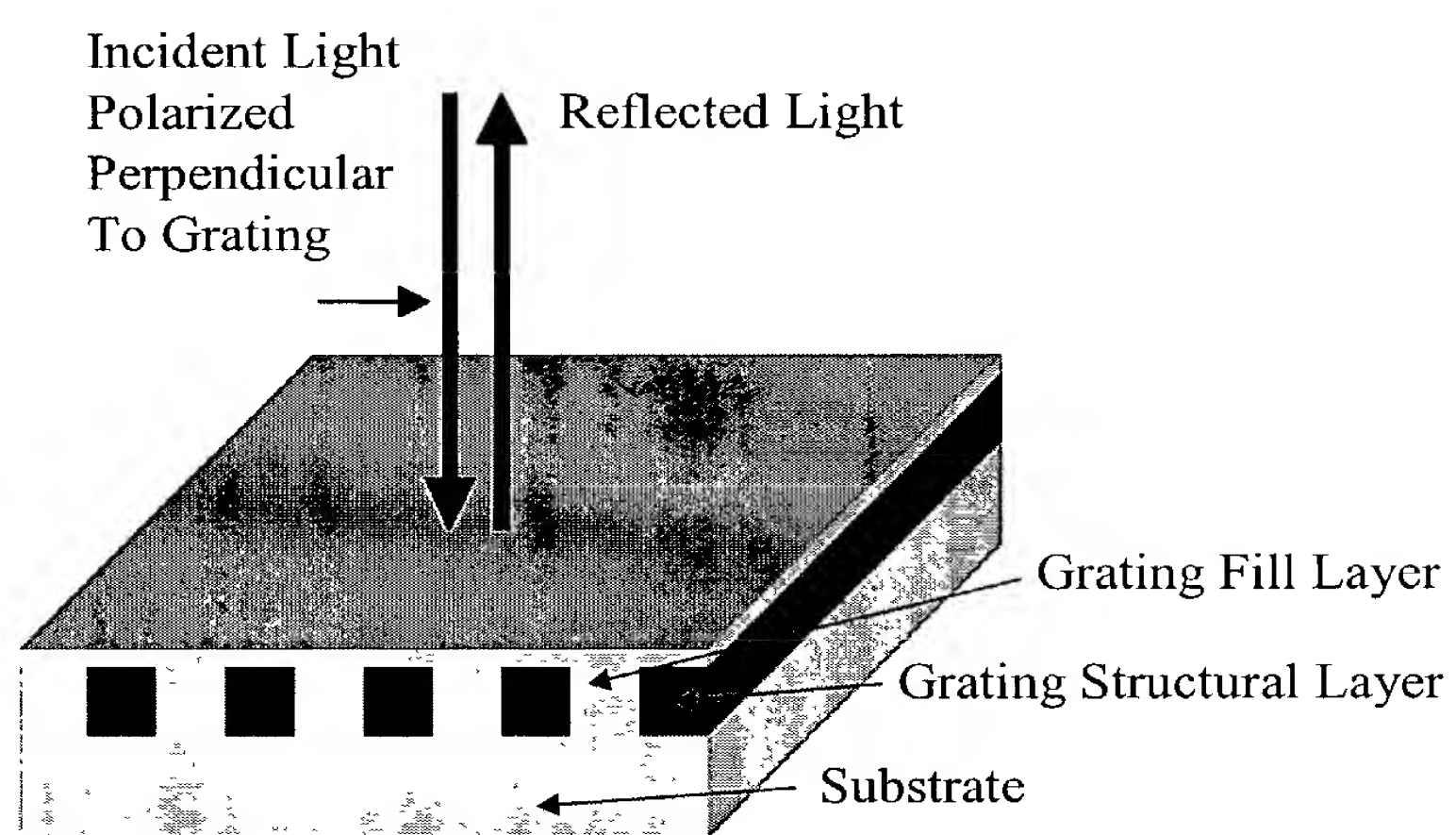


Figure 2



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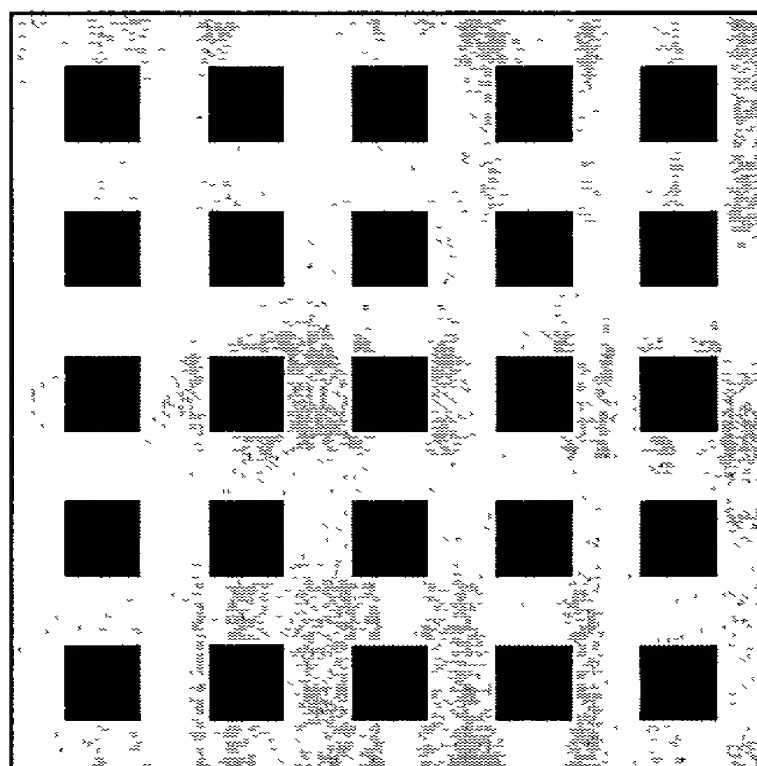


Figure 3A

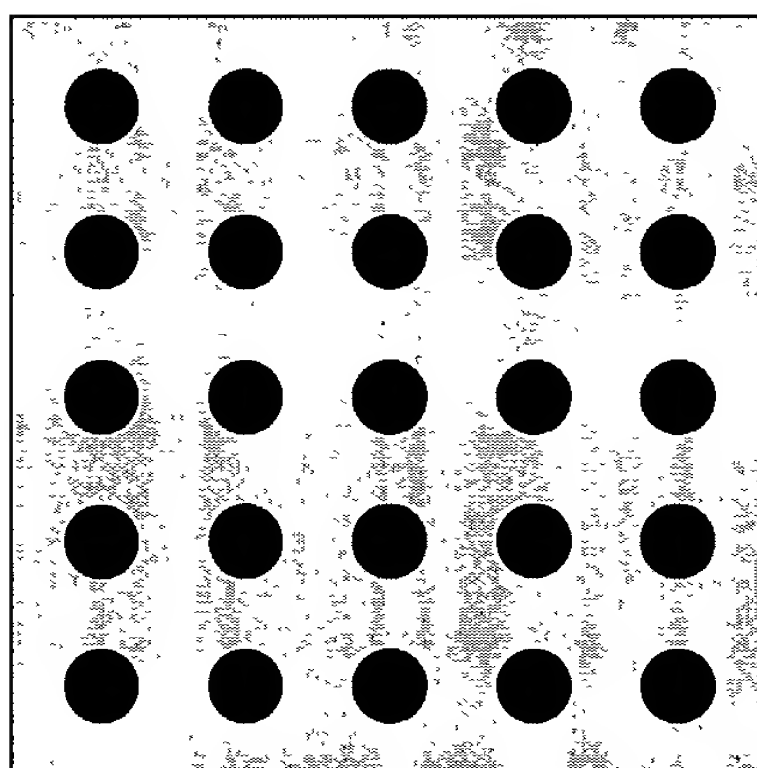
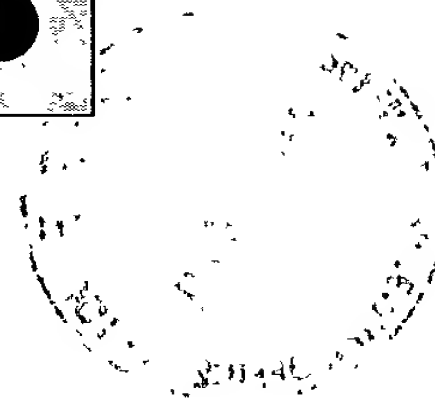


Figure 3B



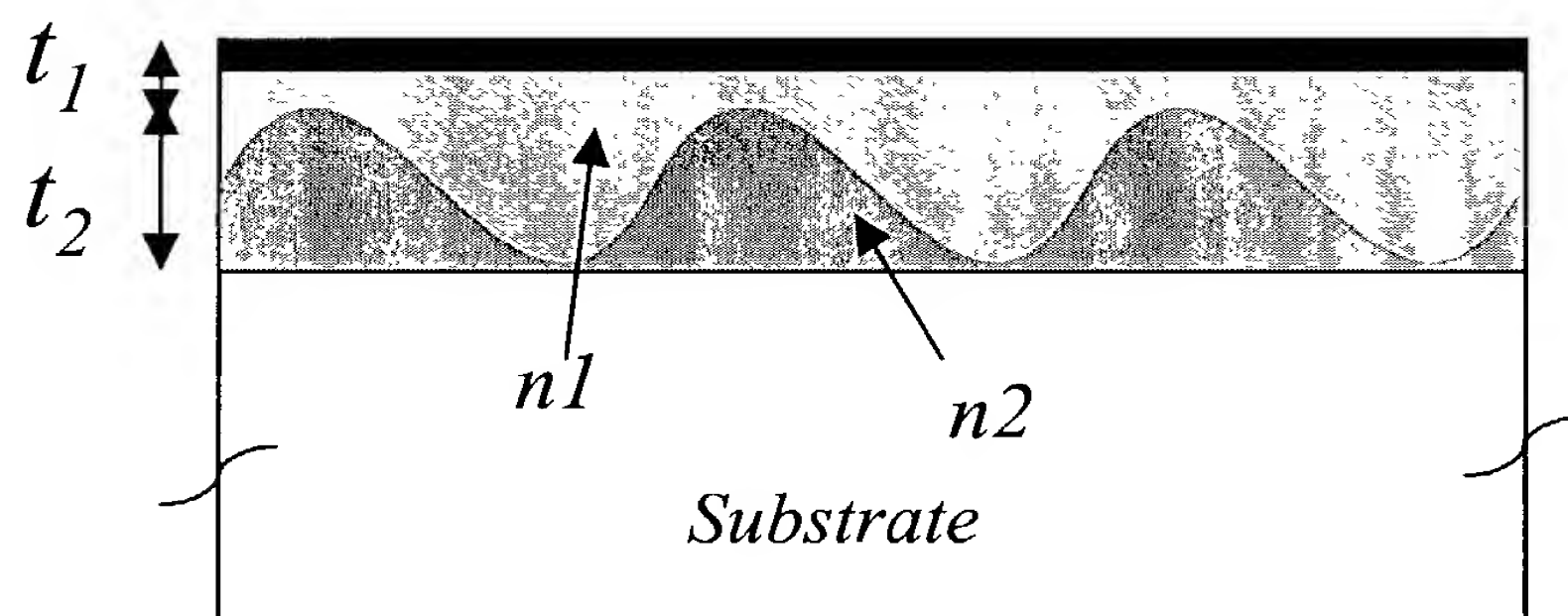


Figure 4



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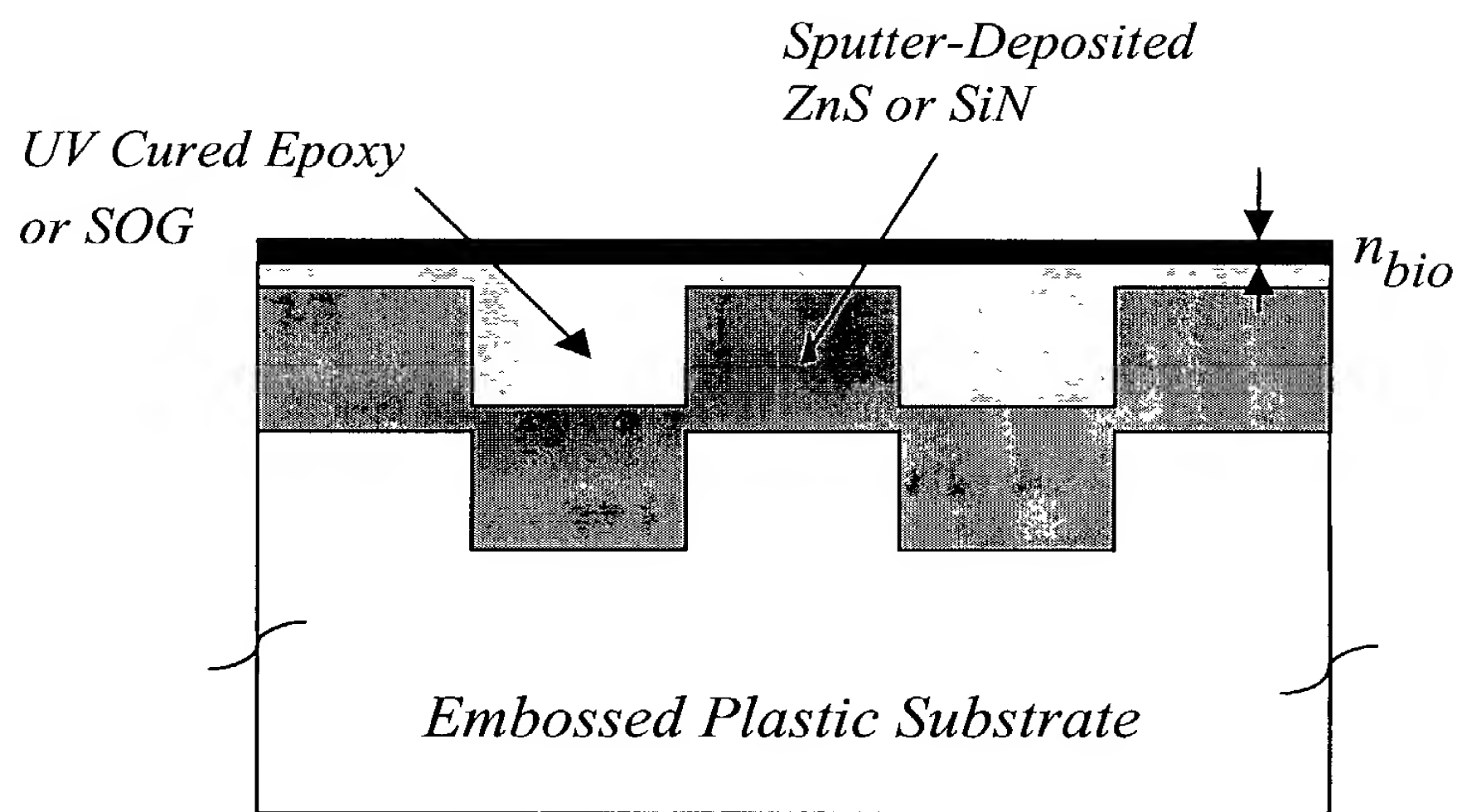


Figure 5





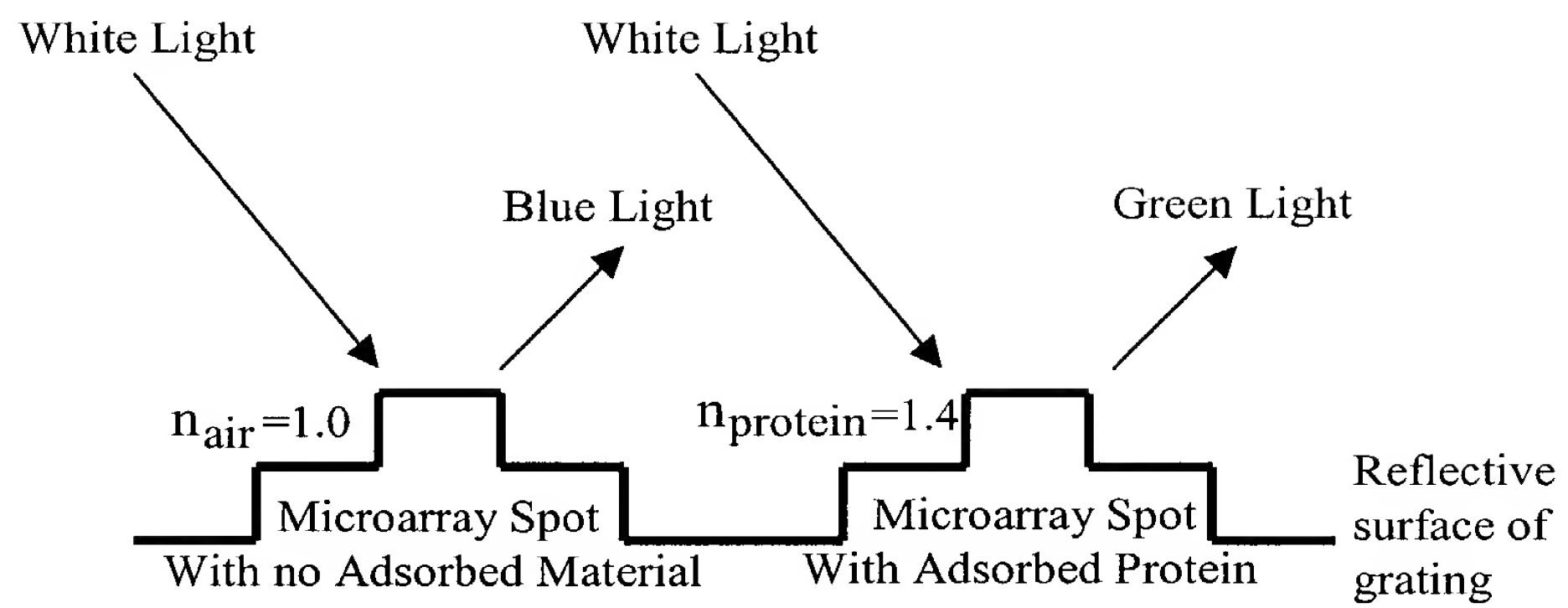
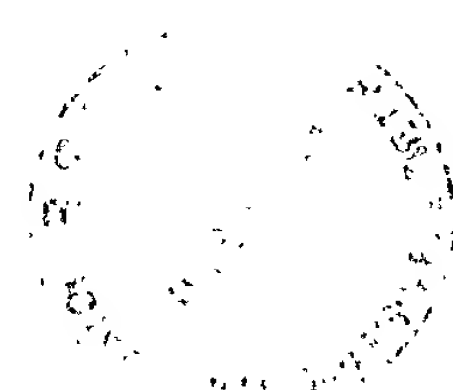


Figure 8



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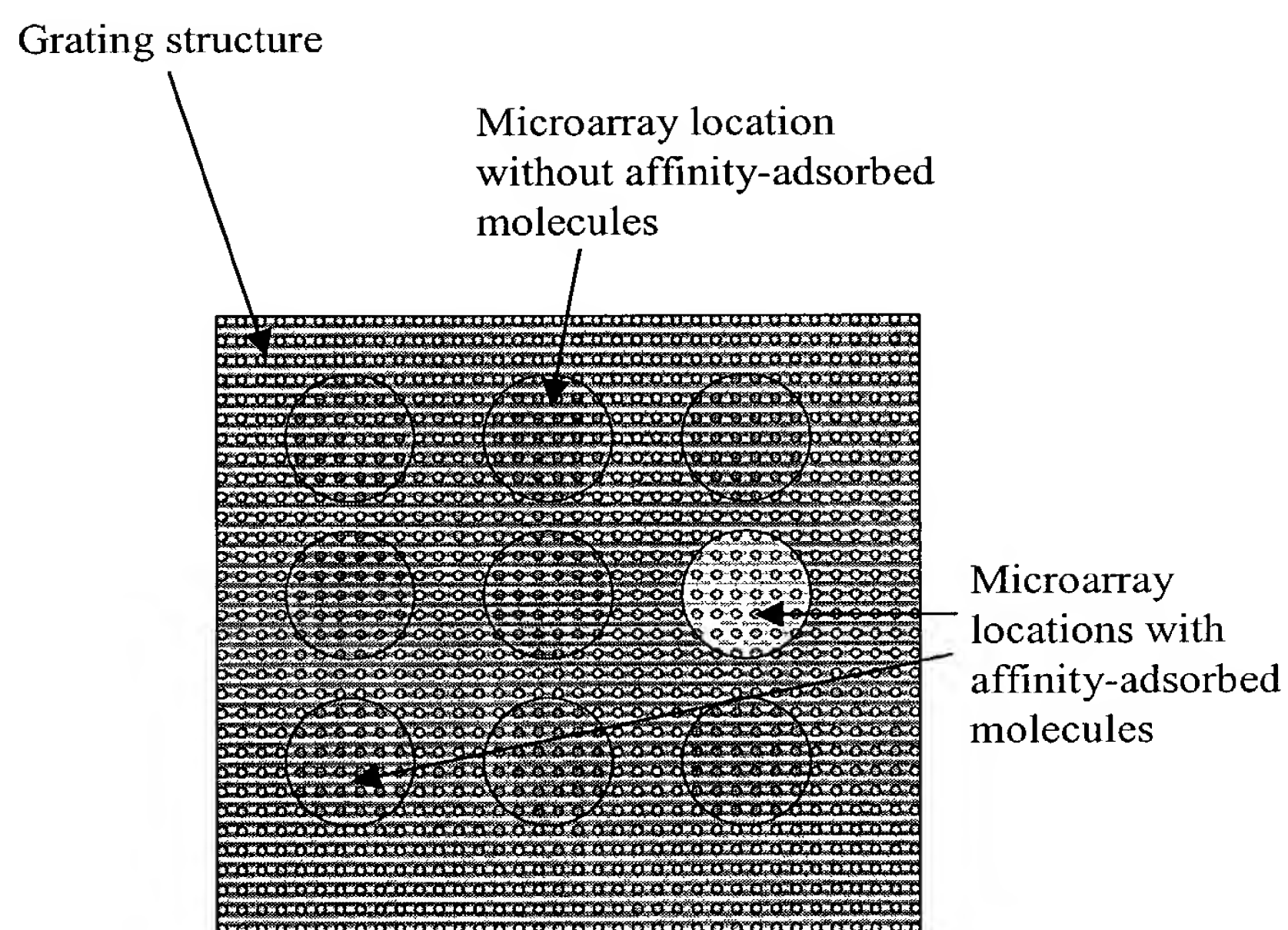
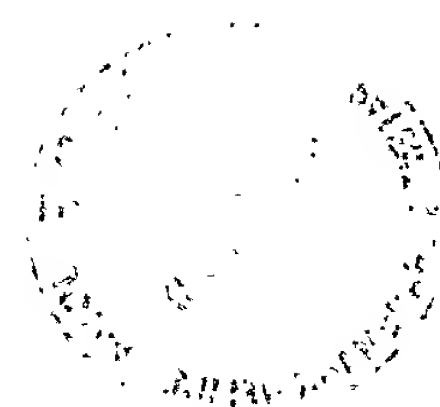


Figure 9



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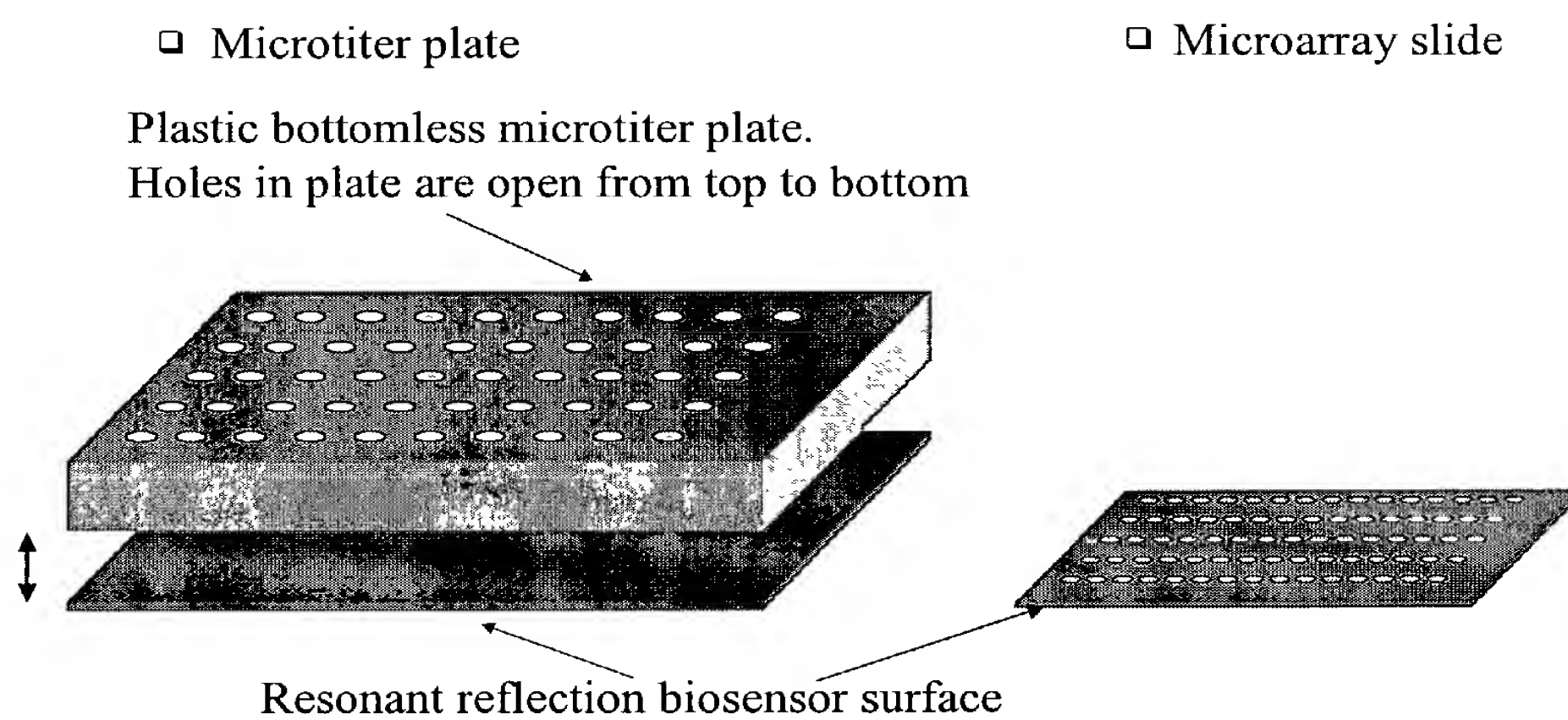


Figure 10A

Figure 10B



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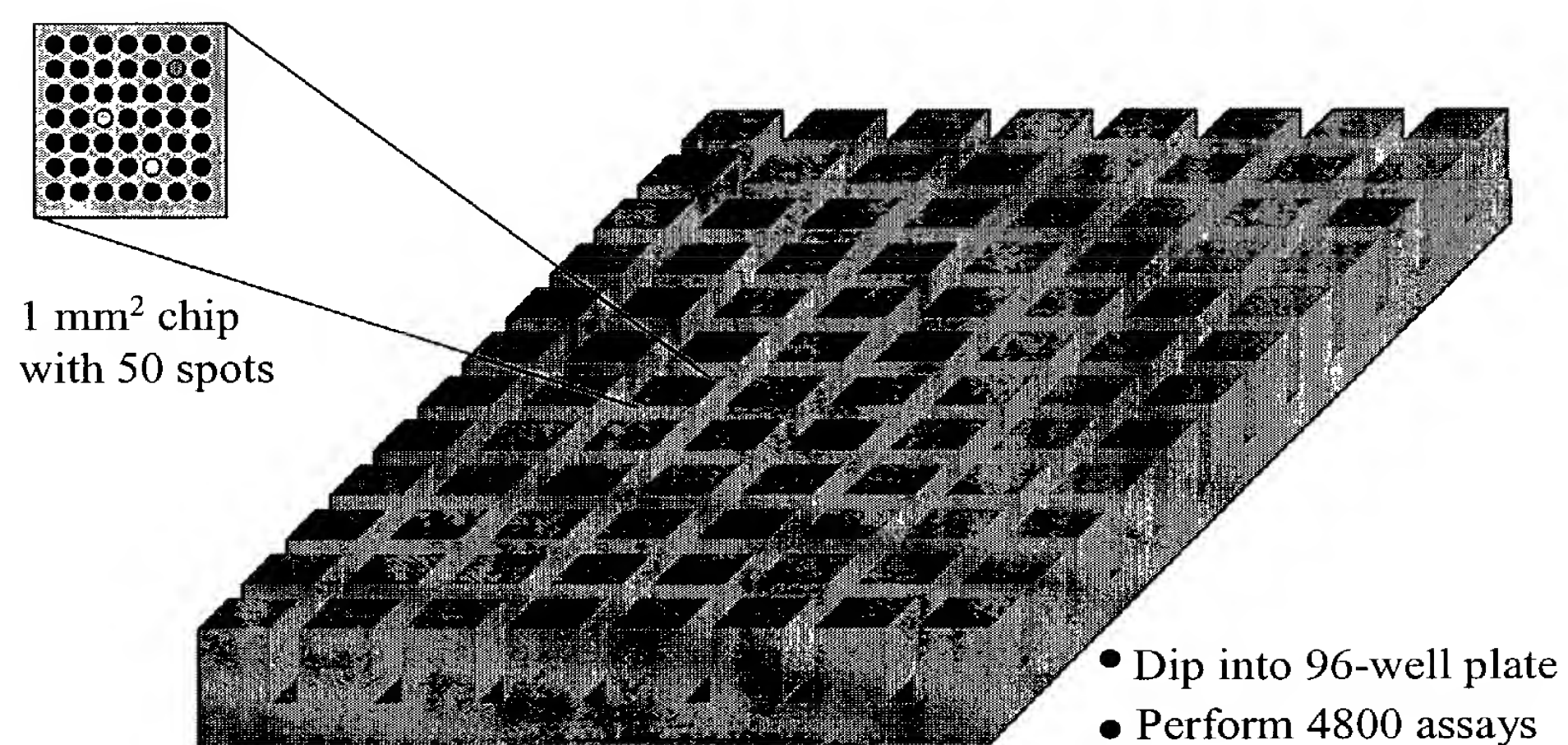


Figure 11



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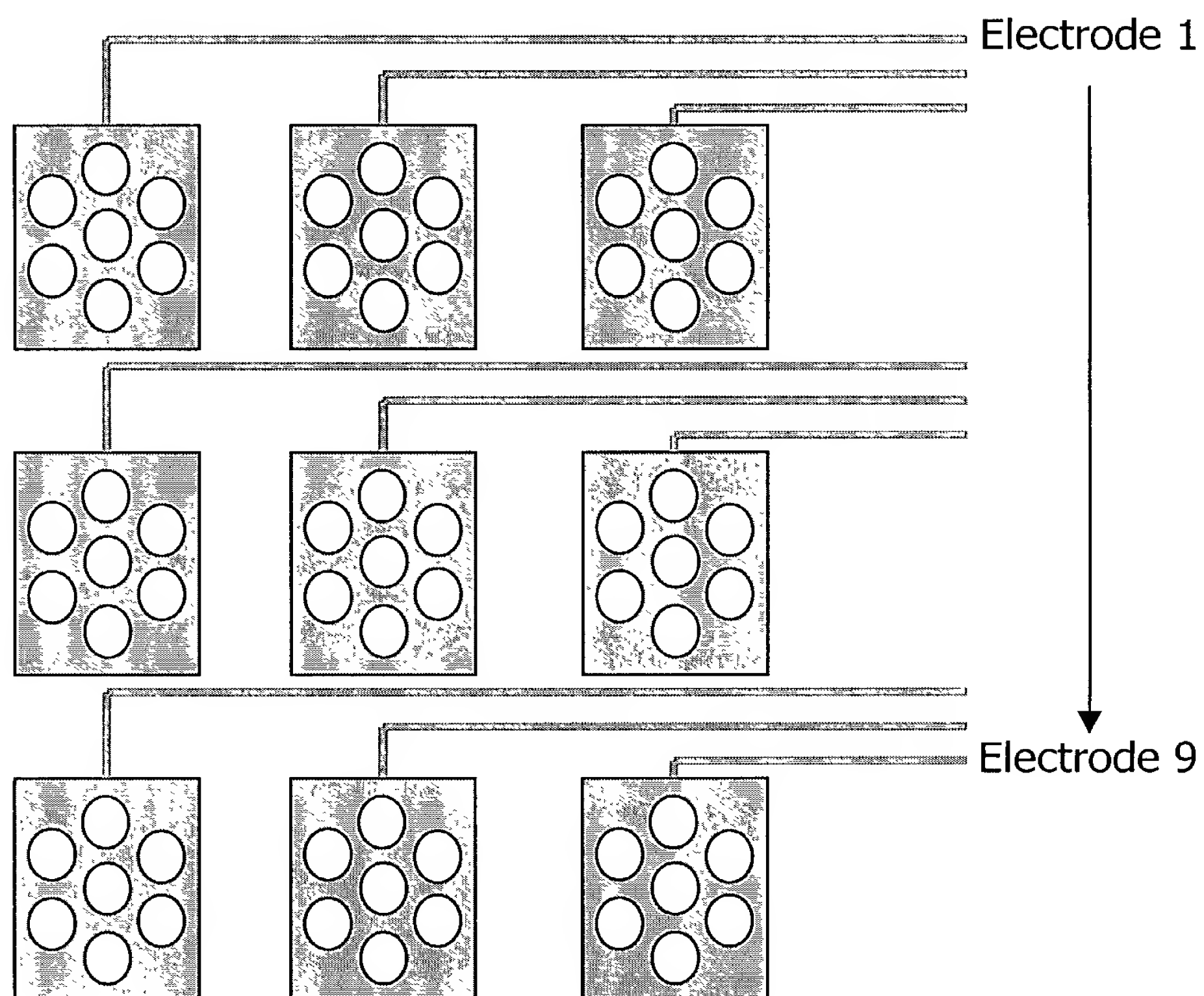
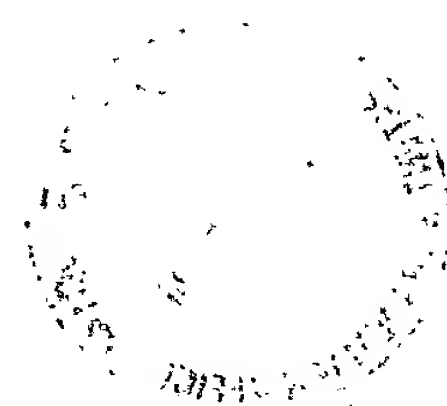
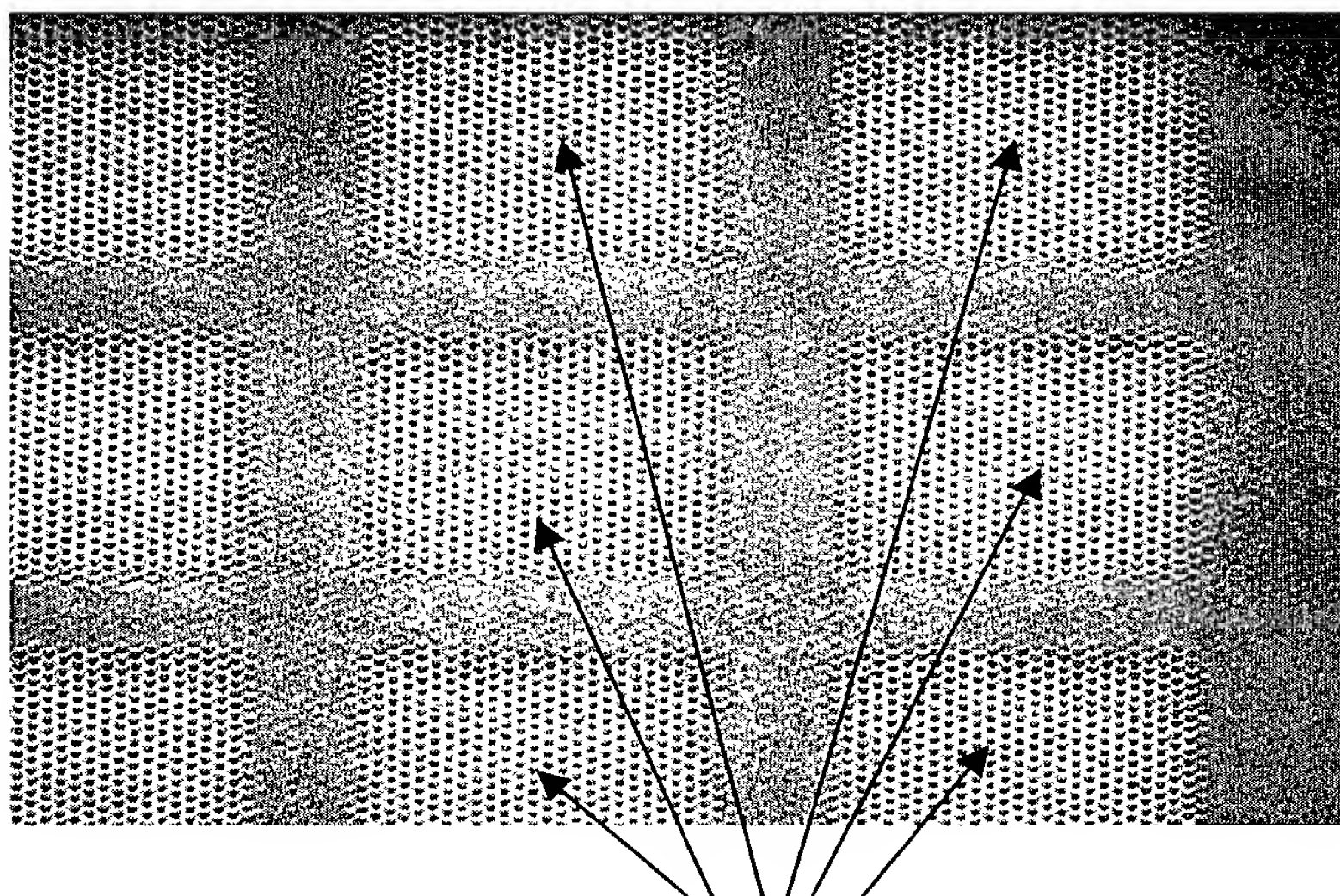


Figure 12



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Separate electrode grating regions

Figure 13



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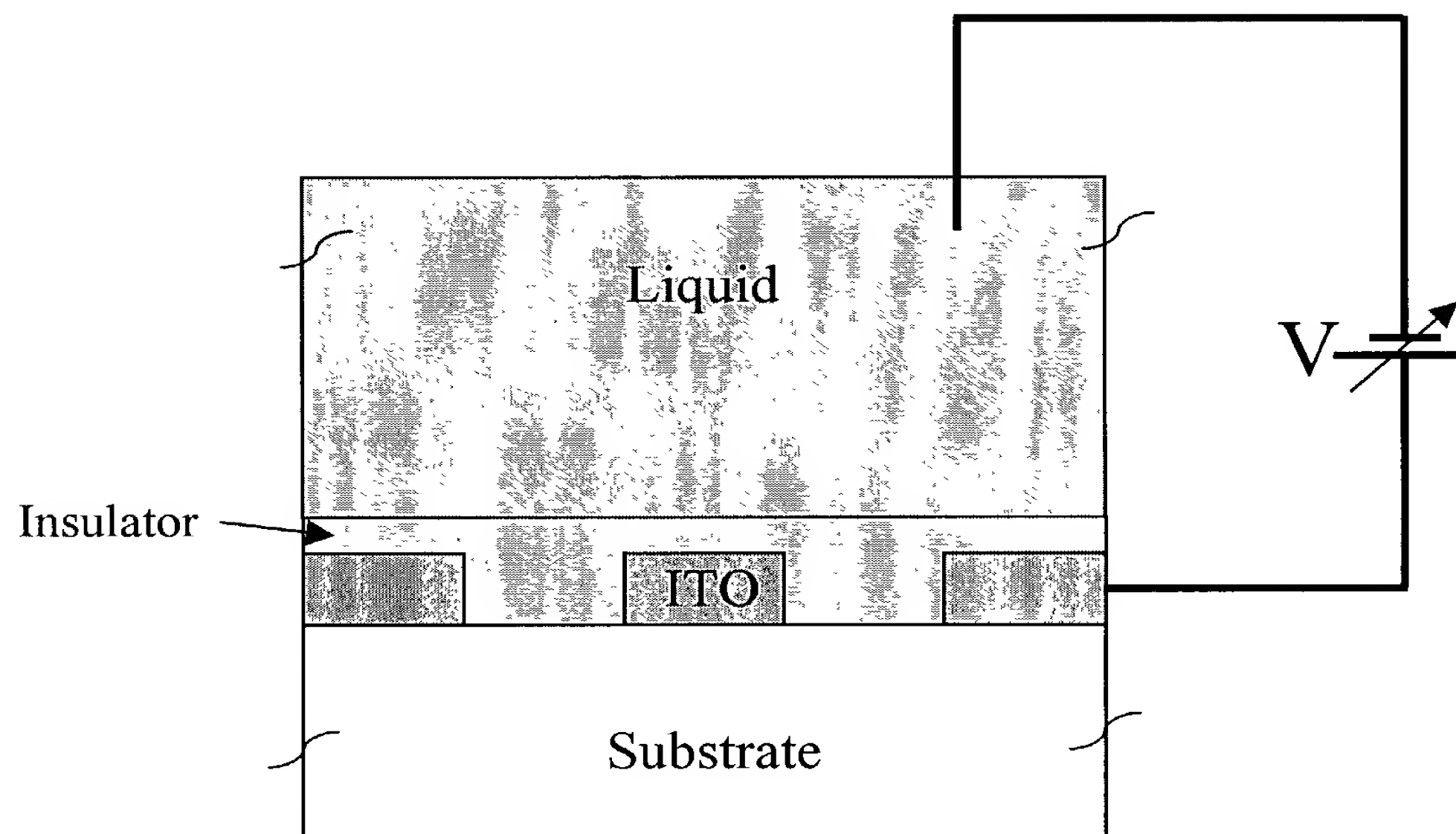


Figure 14



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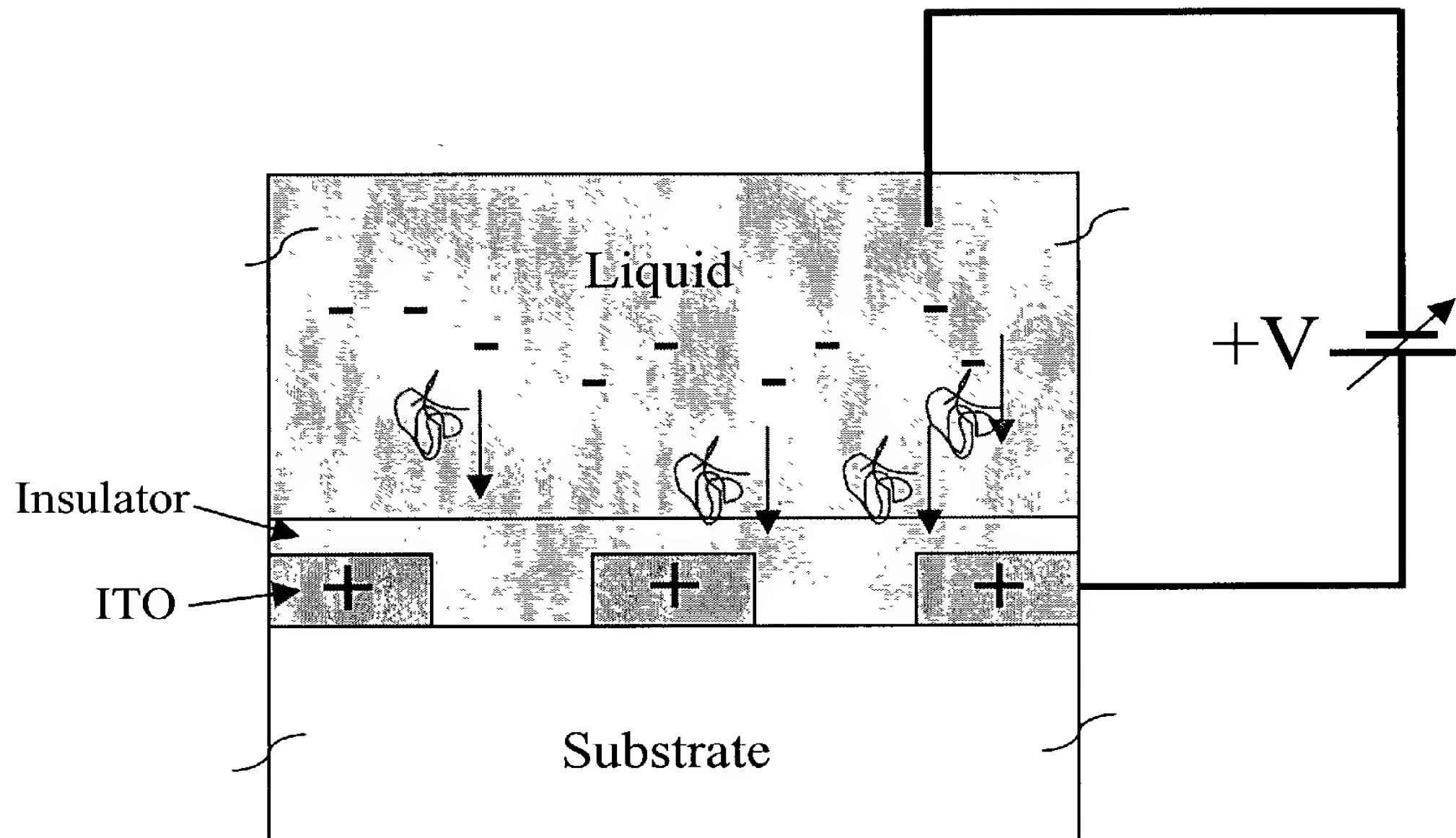
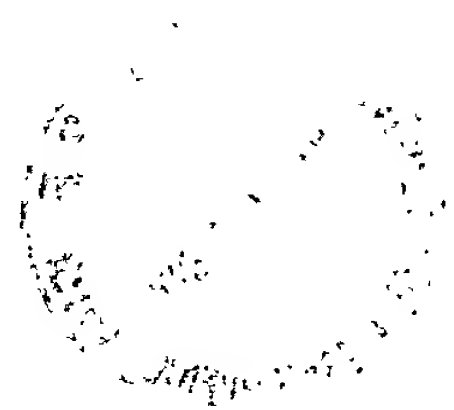


Figure 15



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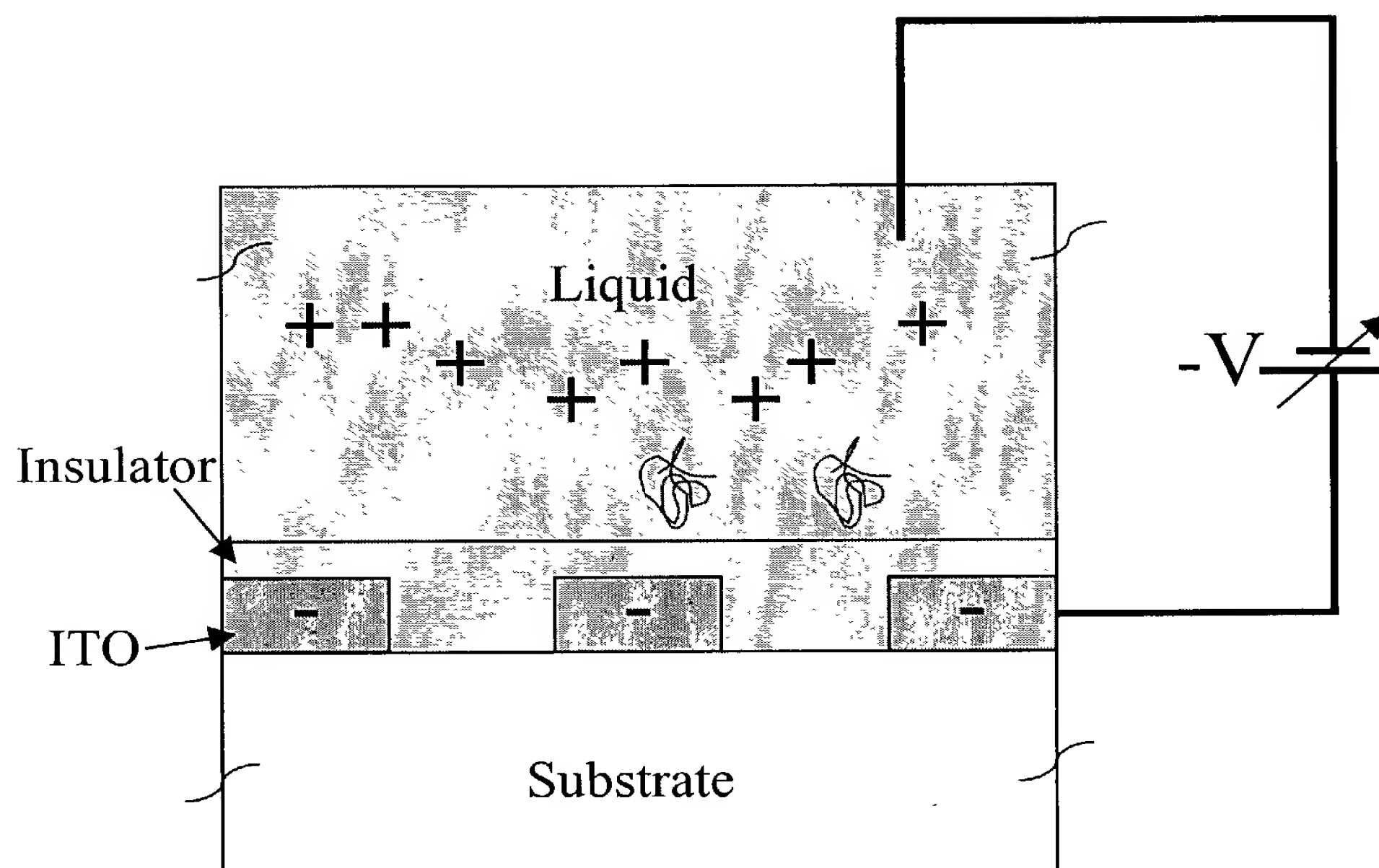


Figure 16



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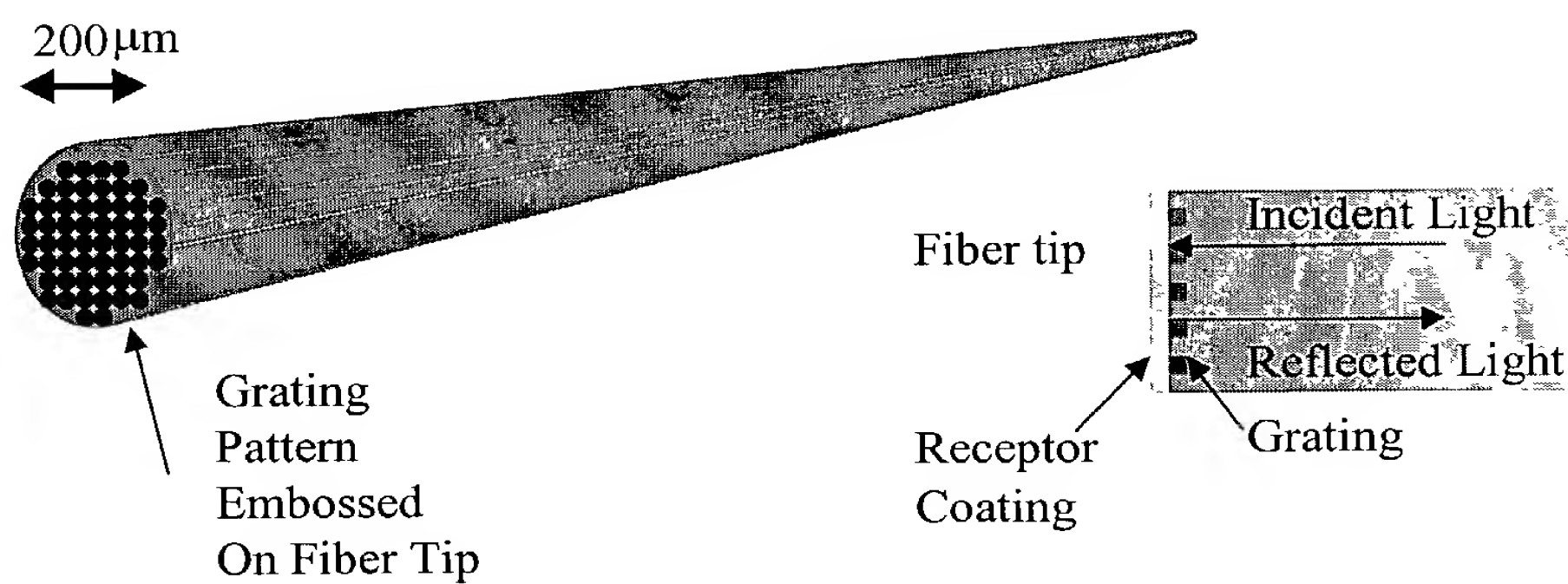


Figure 17



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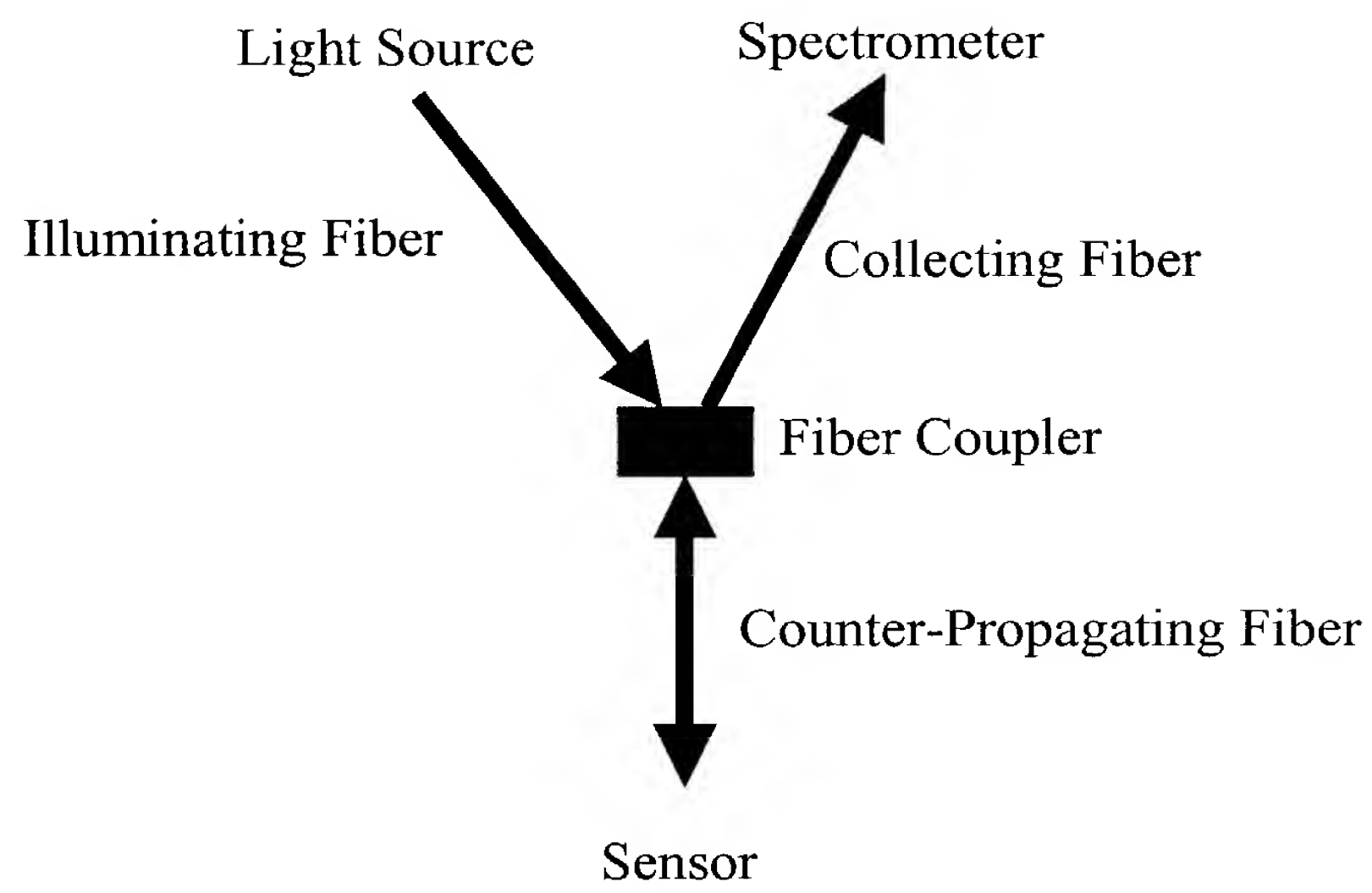
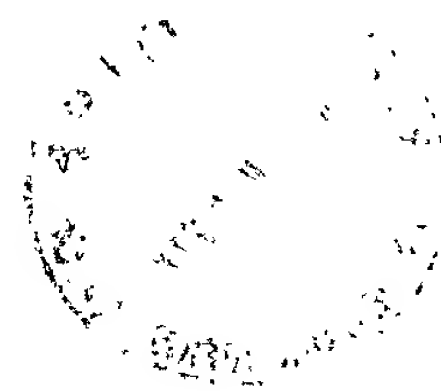


Figure 18



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Peak Wavelength

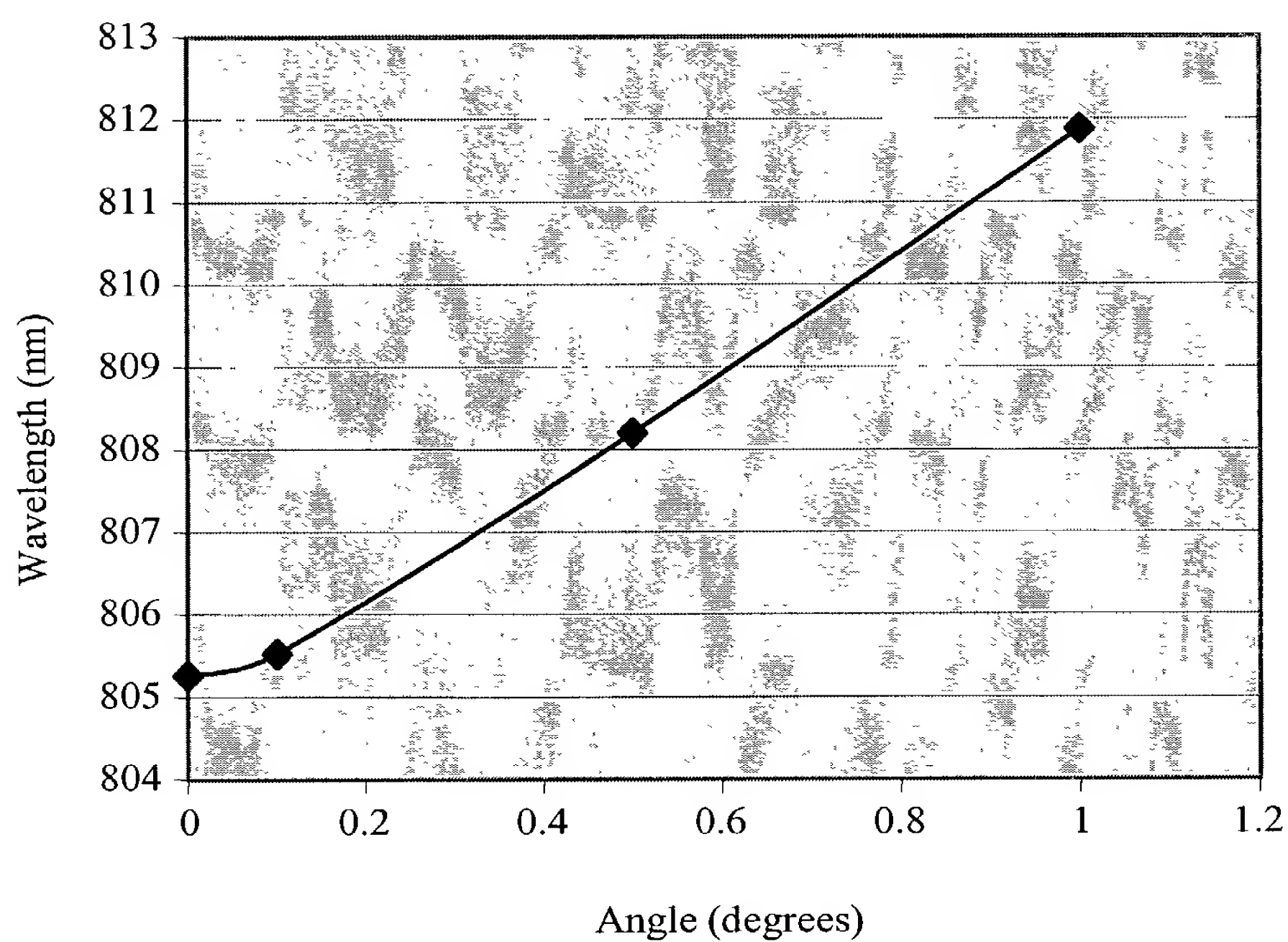
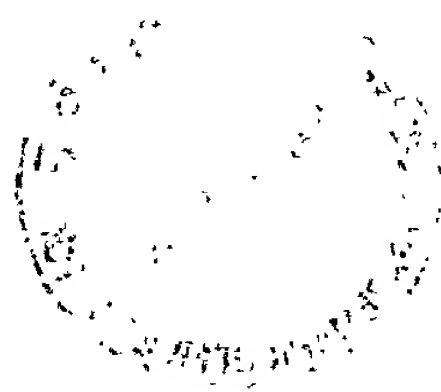


Figure 19



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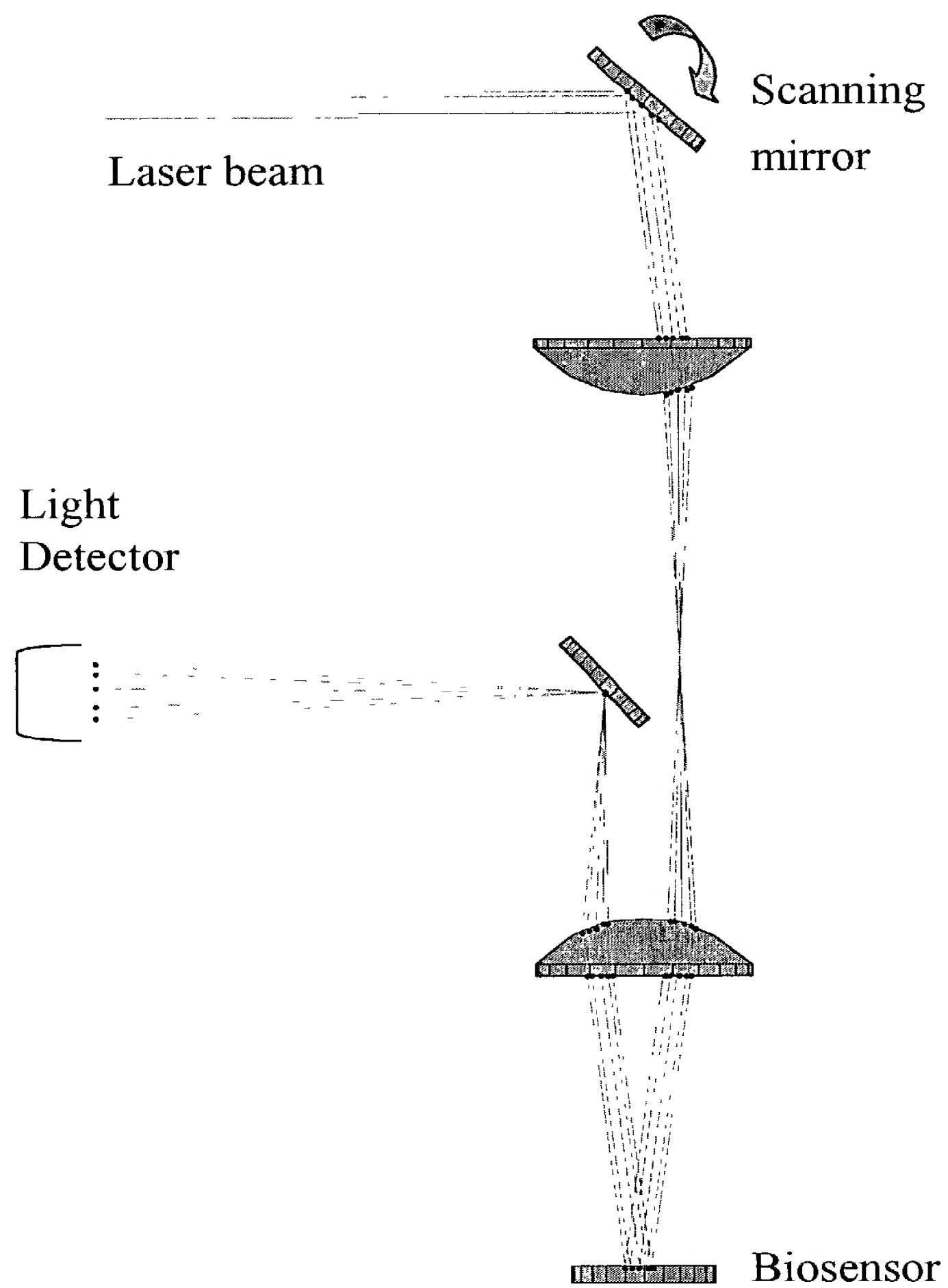
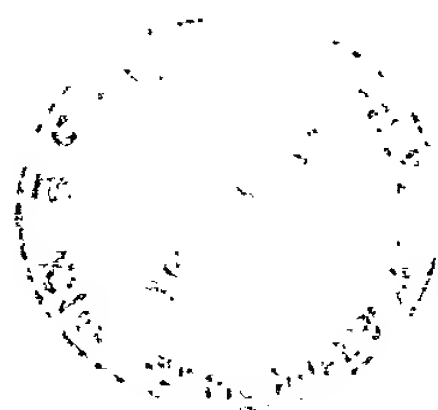


Figure 21



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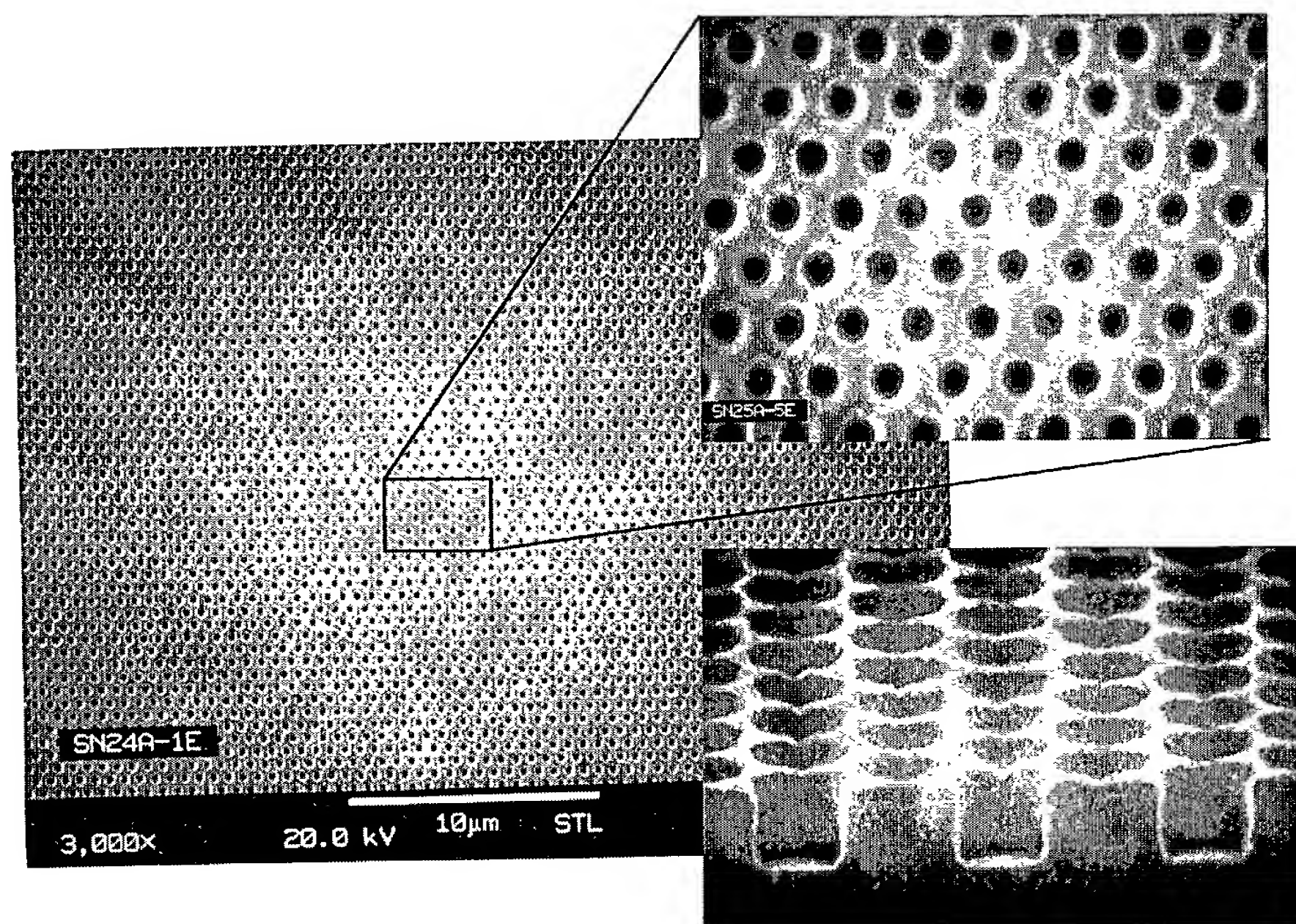


Figure 22



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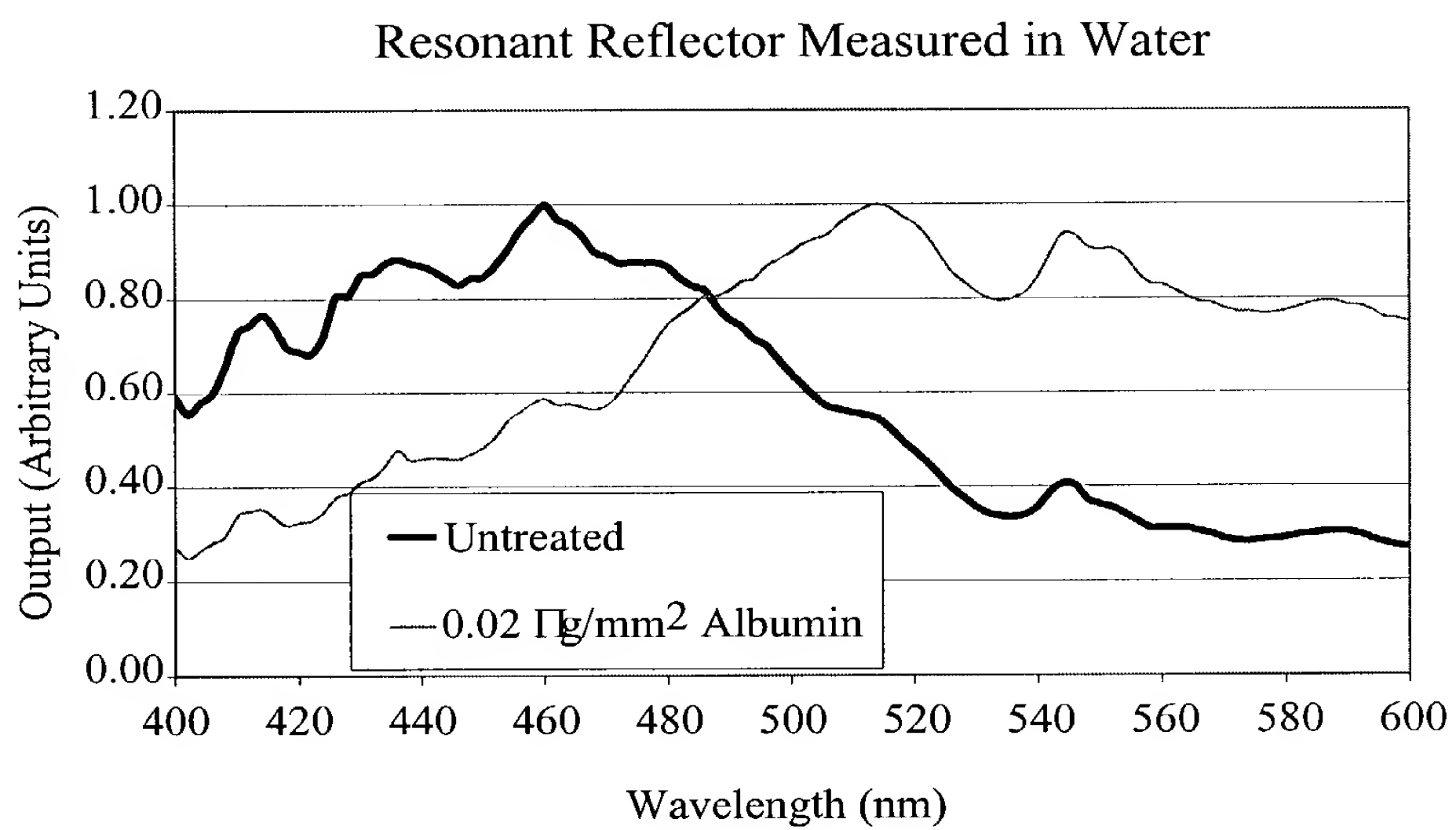
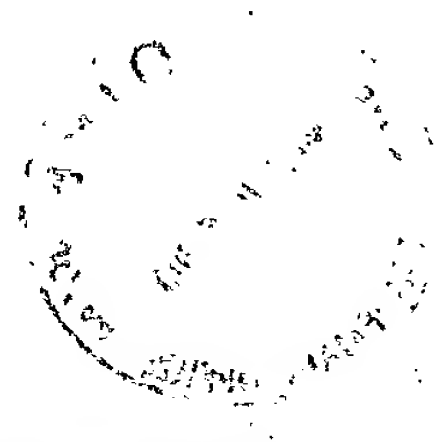


Figure 26



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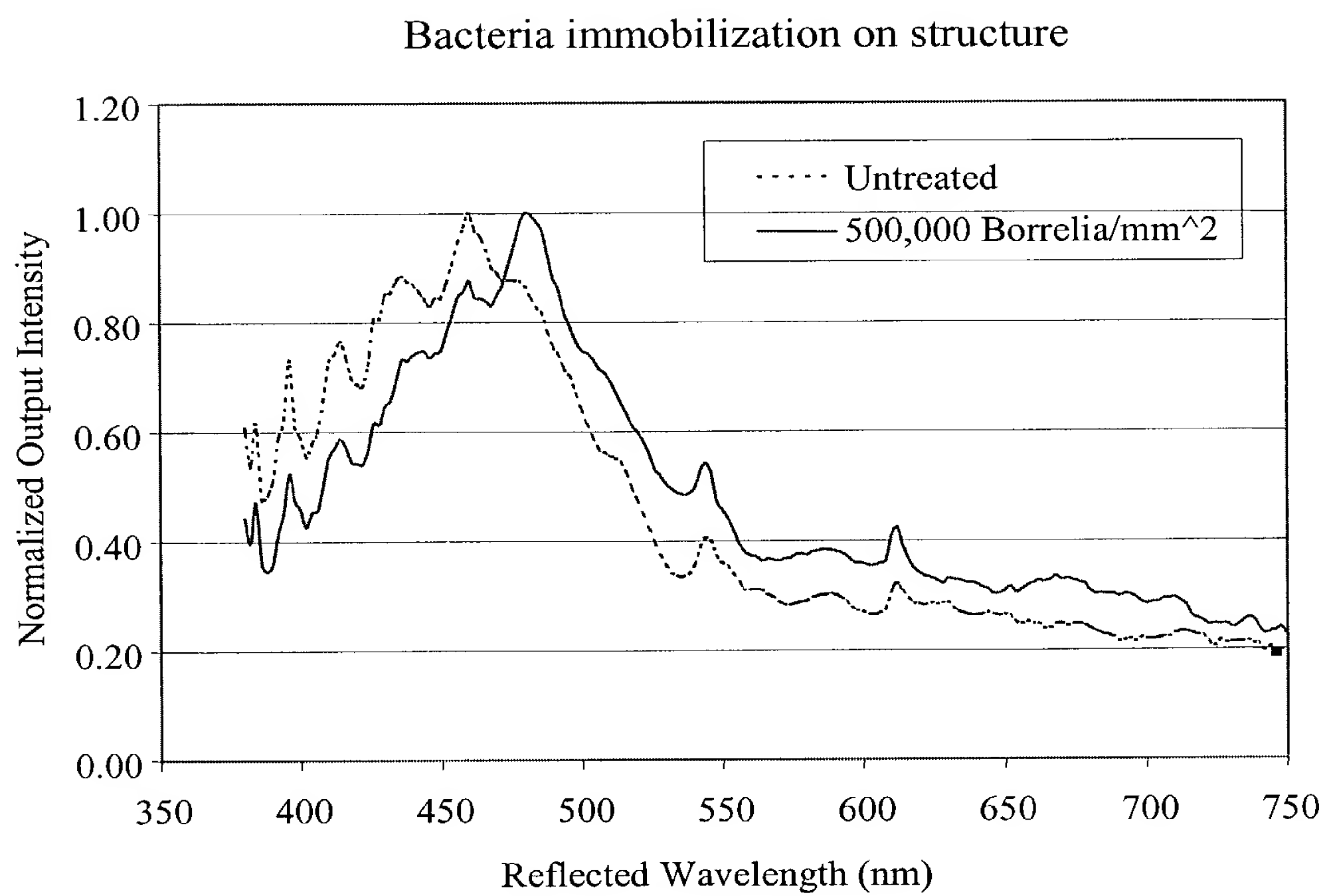
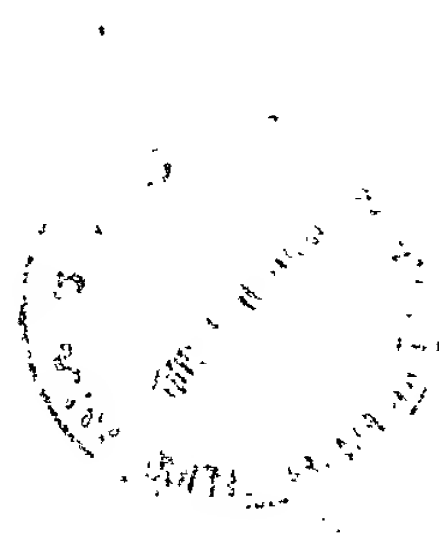


Figure 27



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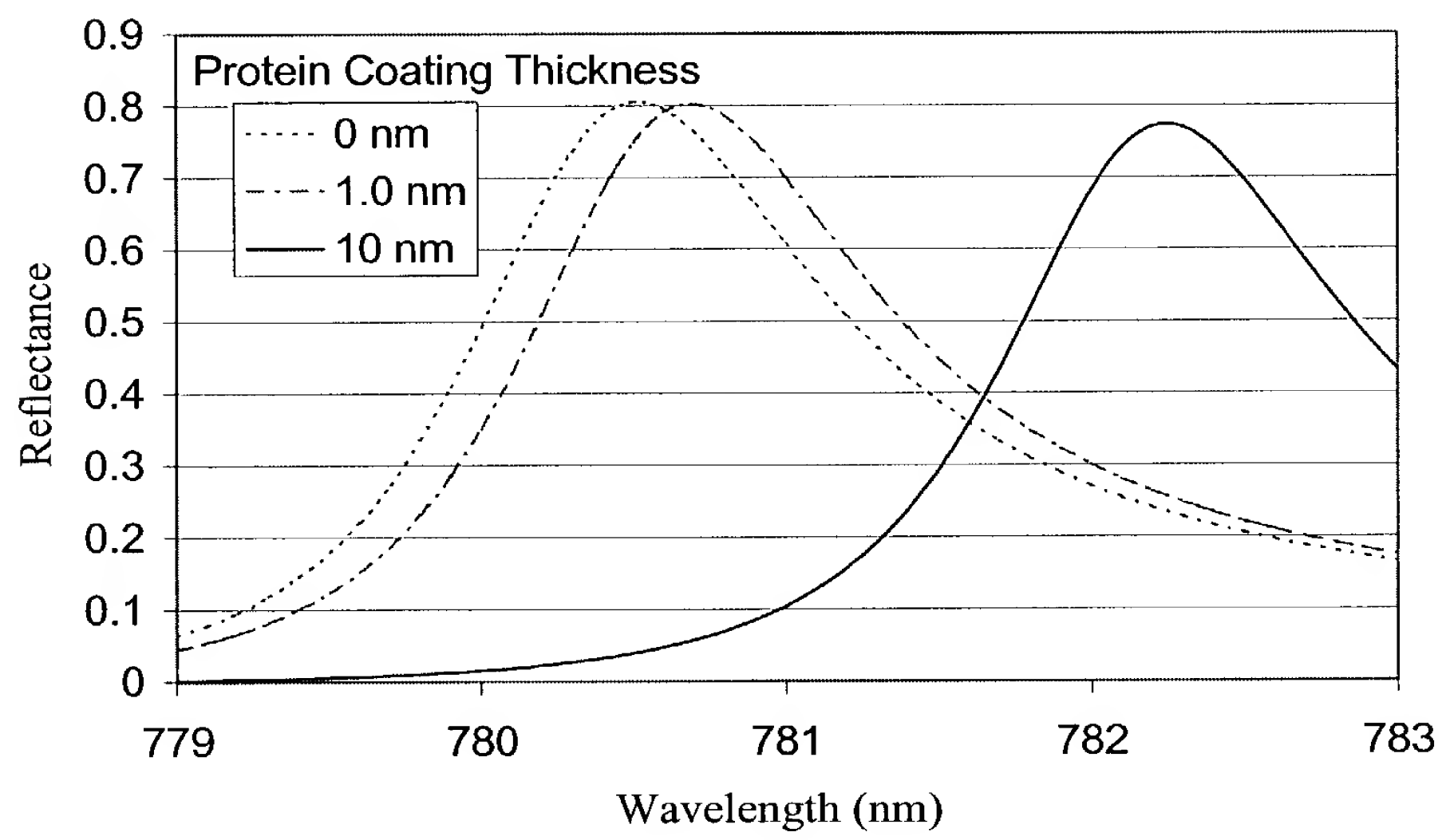


Figure 28

030209052, 030502

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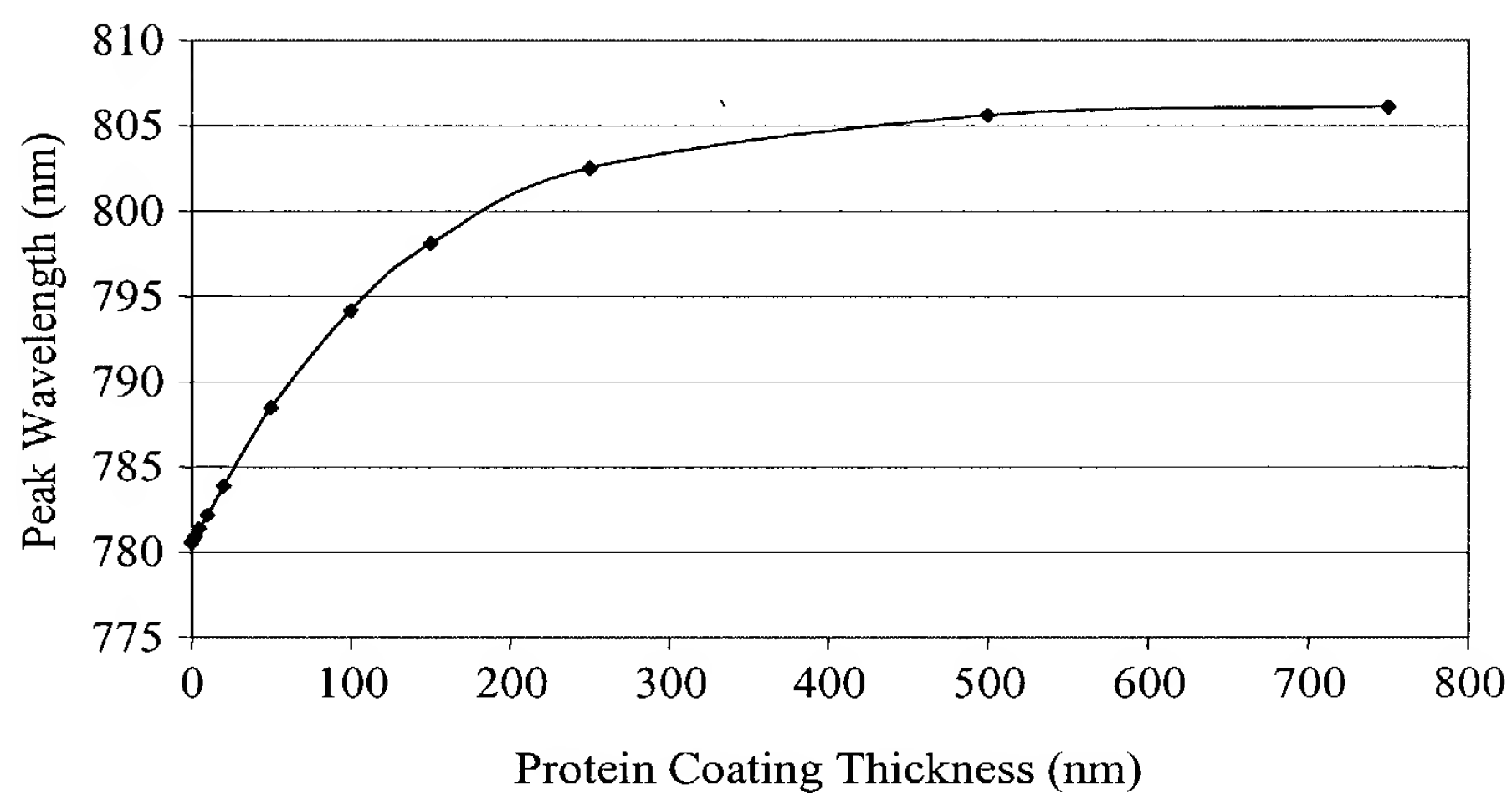
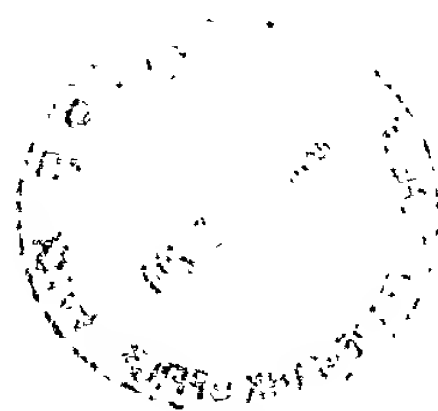


Figure 29





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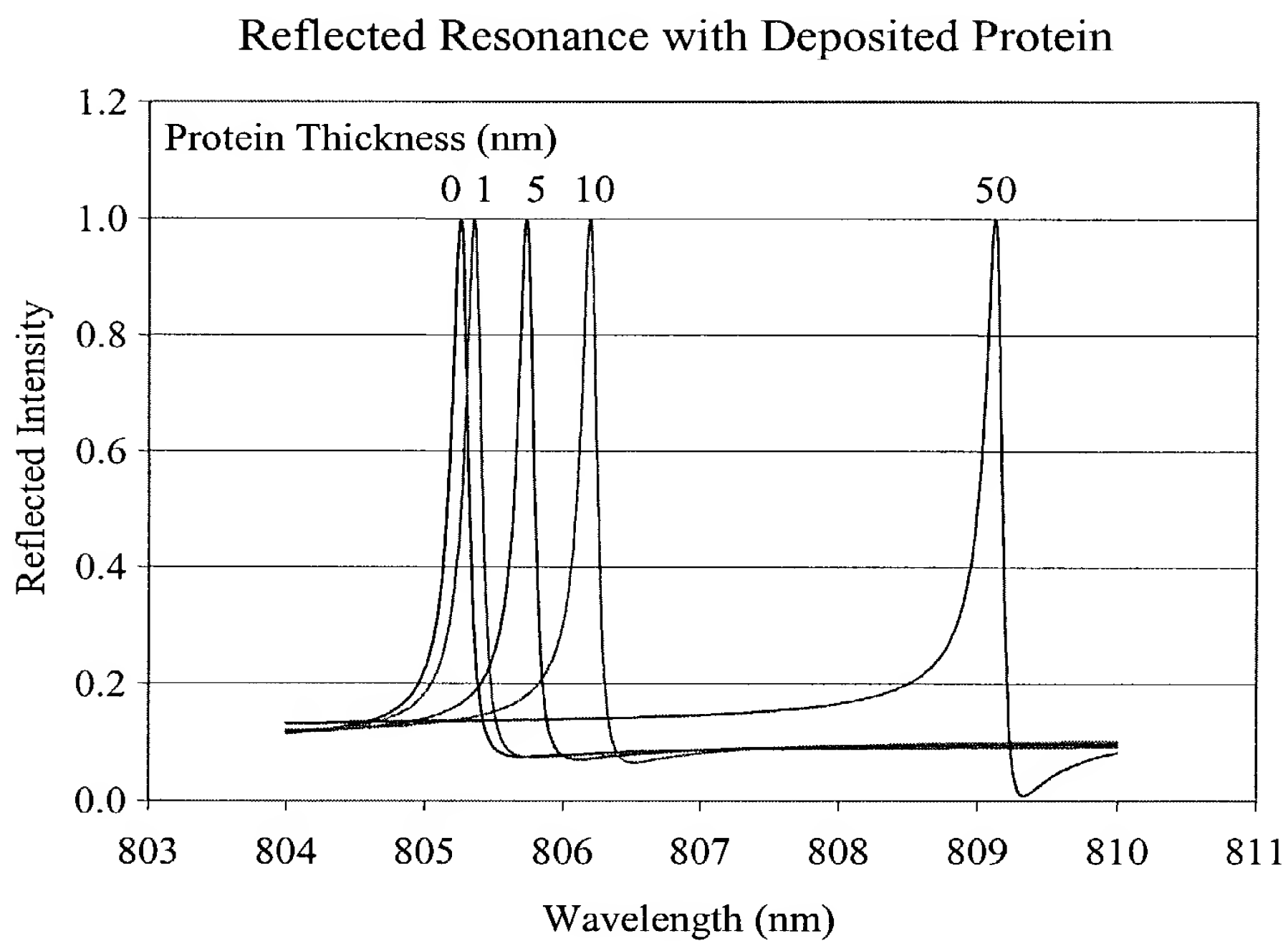
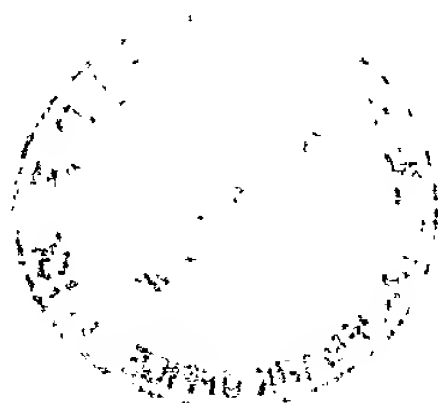
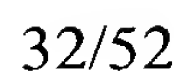


Figure 31





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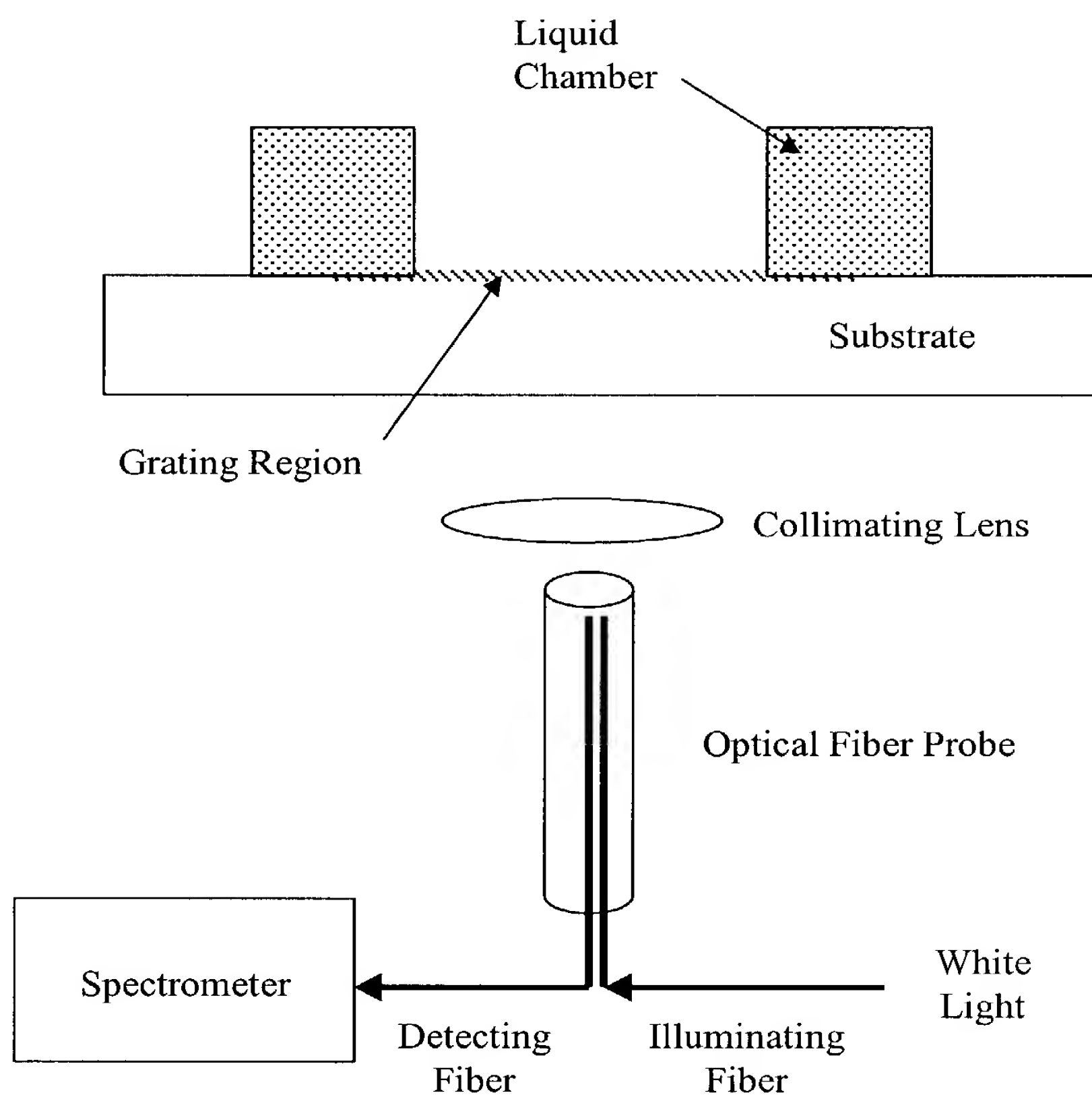
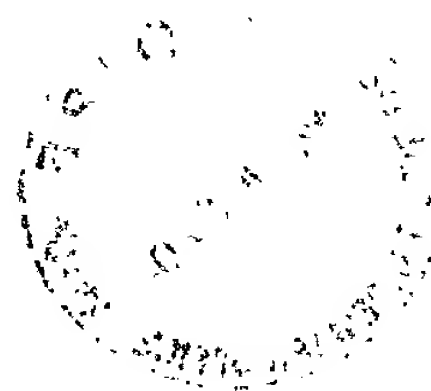


Figure 33





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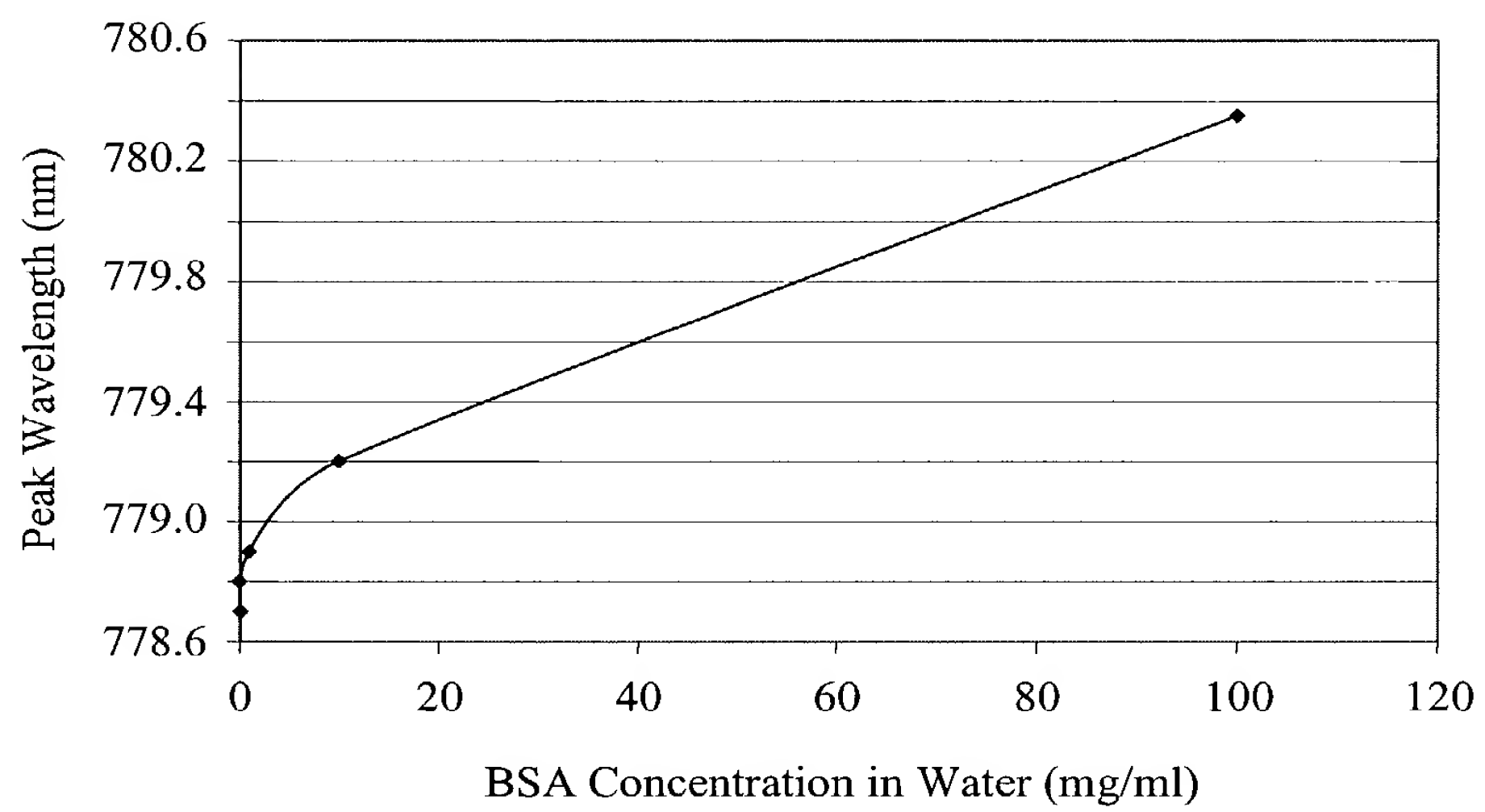


Figure 35



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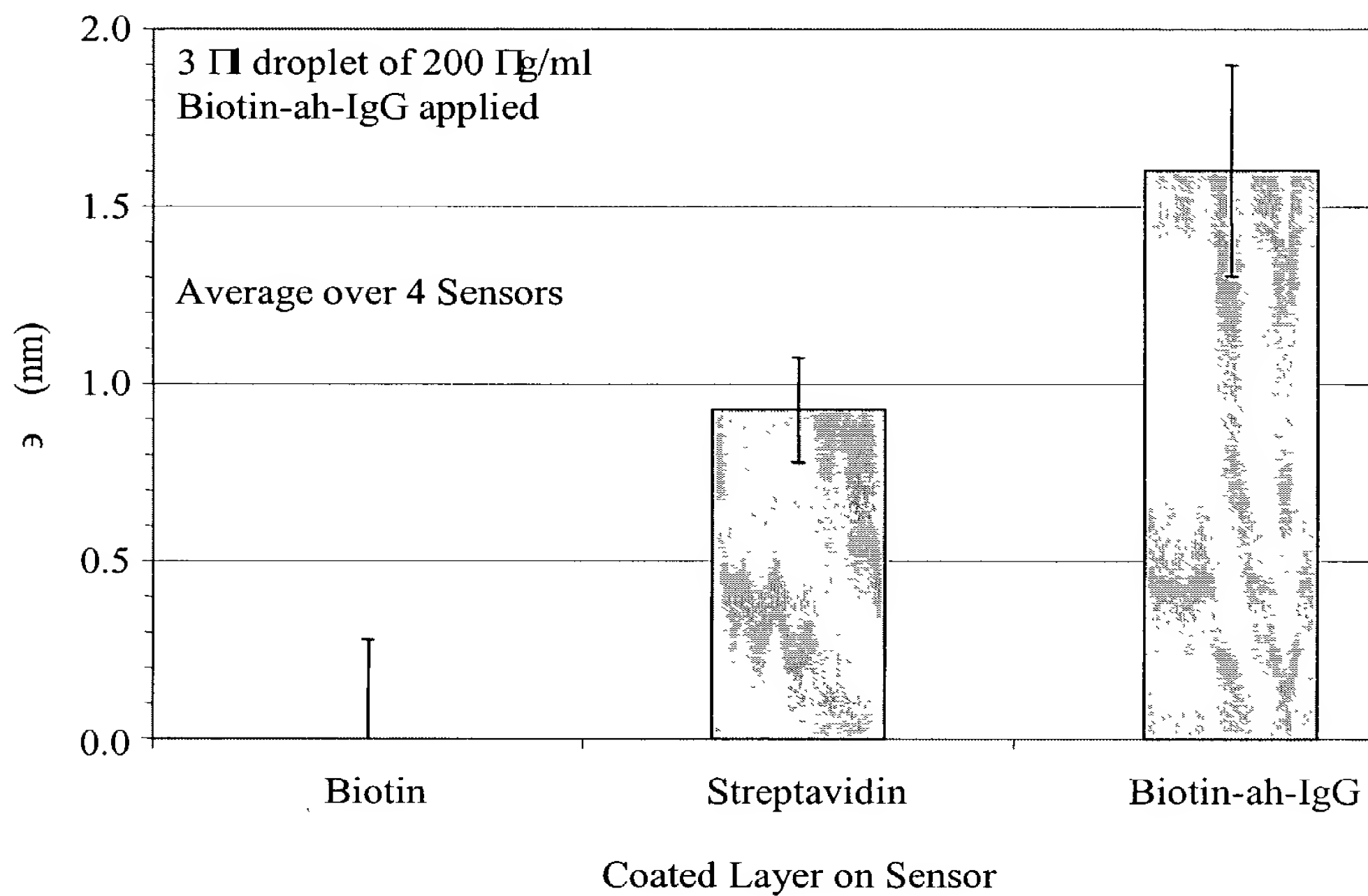


Figure 37A

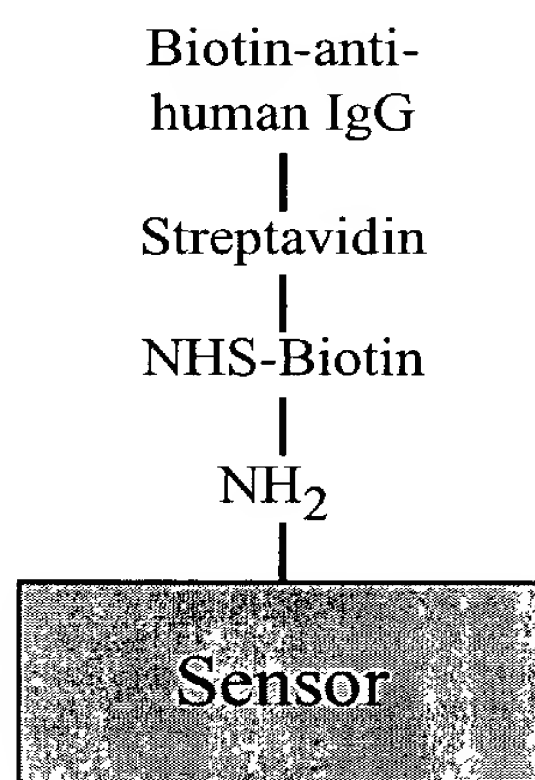


Figure 37B

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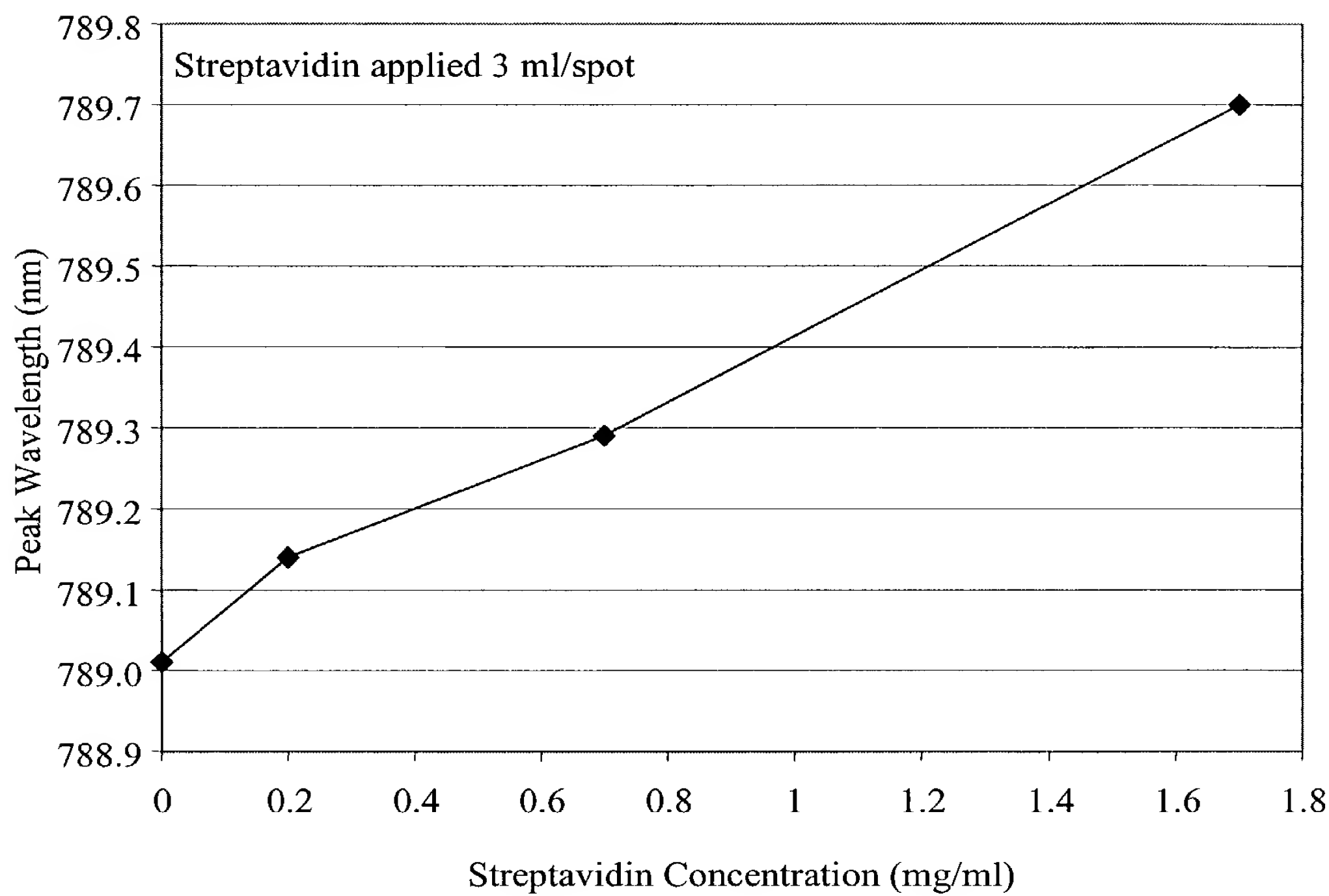


Figure 38A

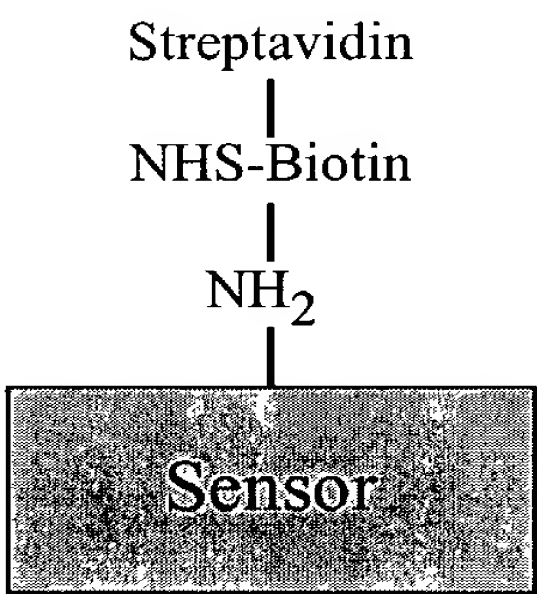


Figure 38B

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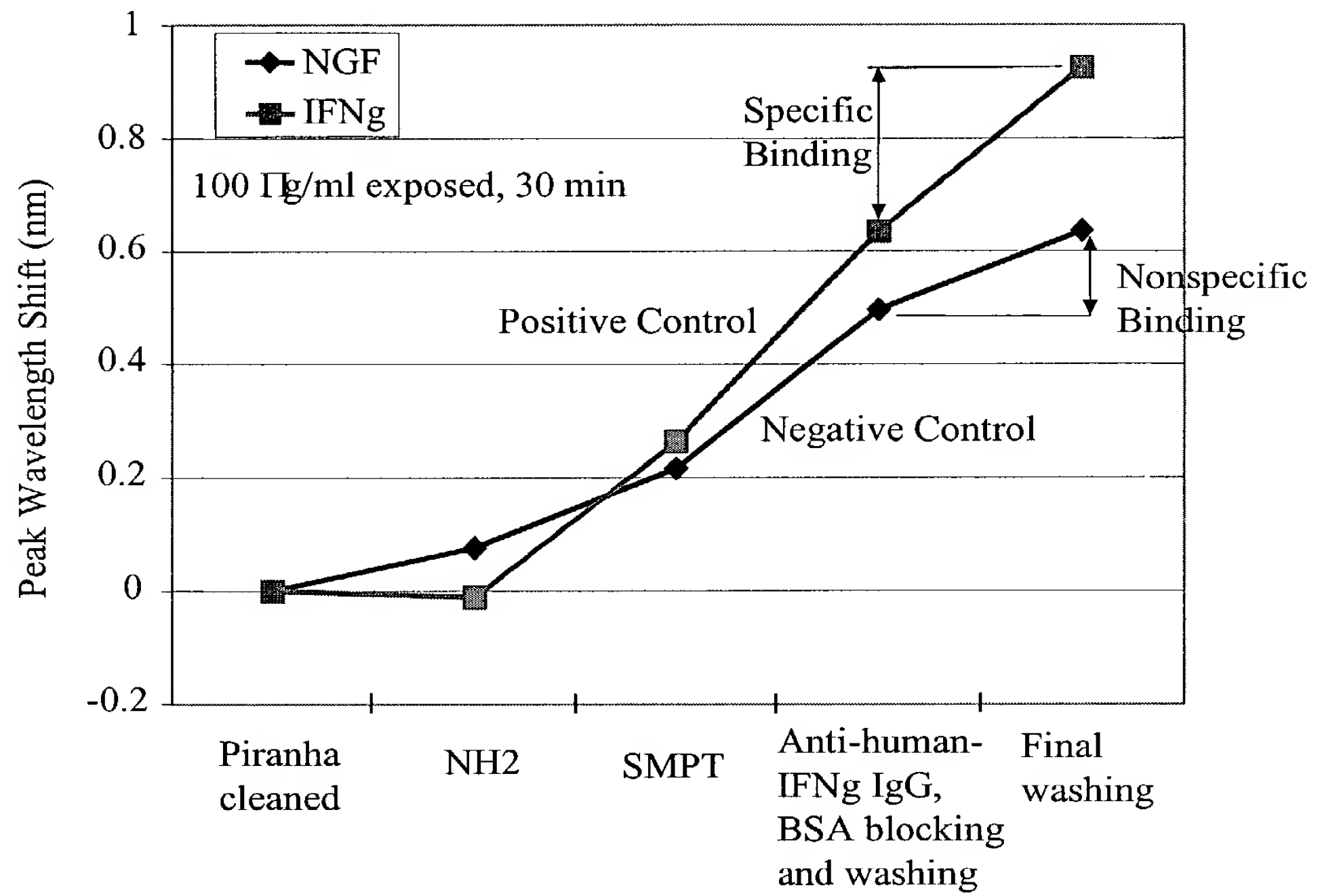


Figure 40A

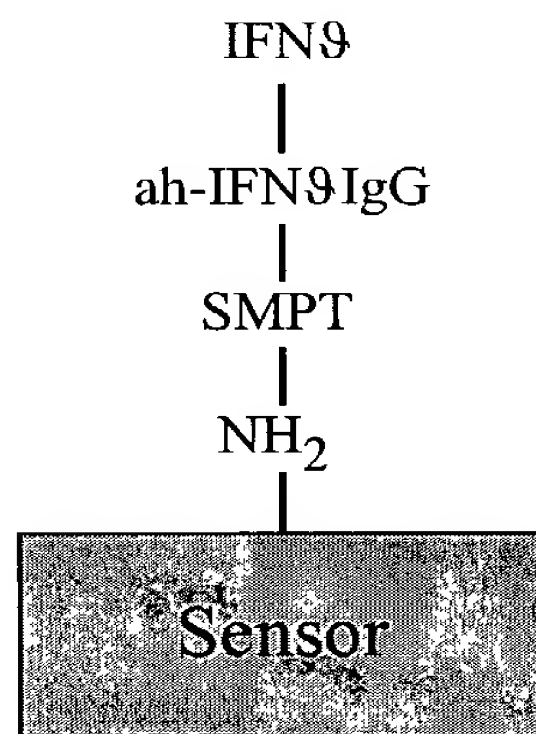


Figure 40B

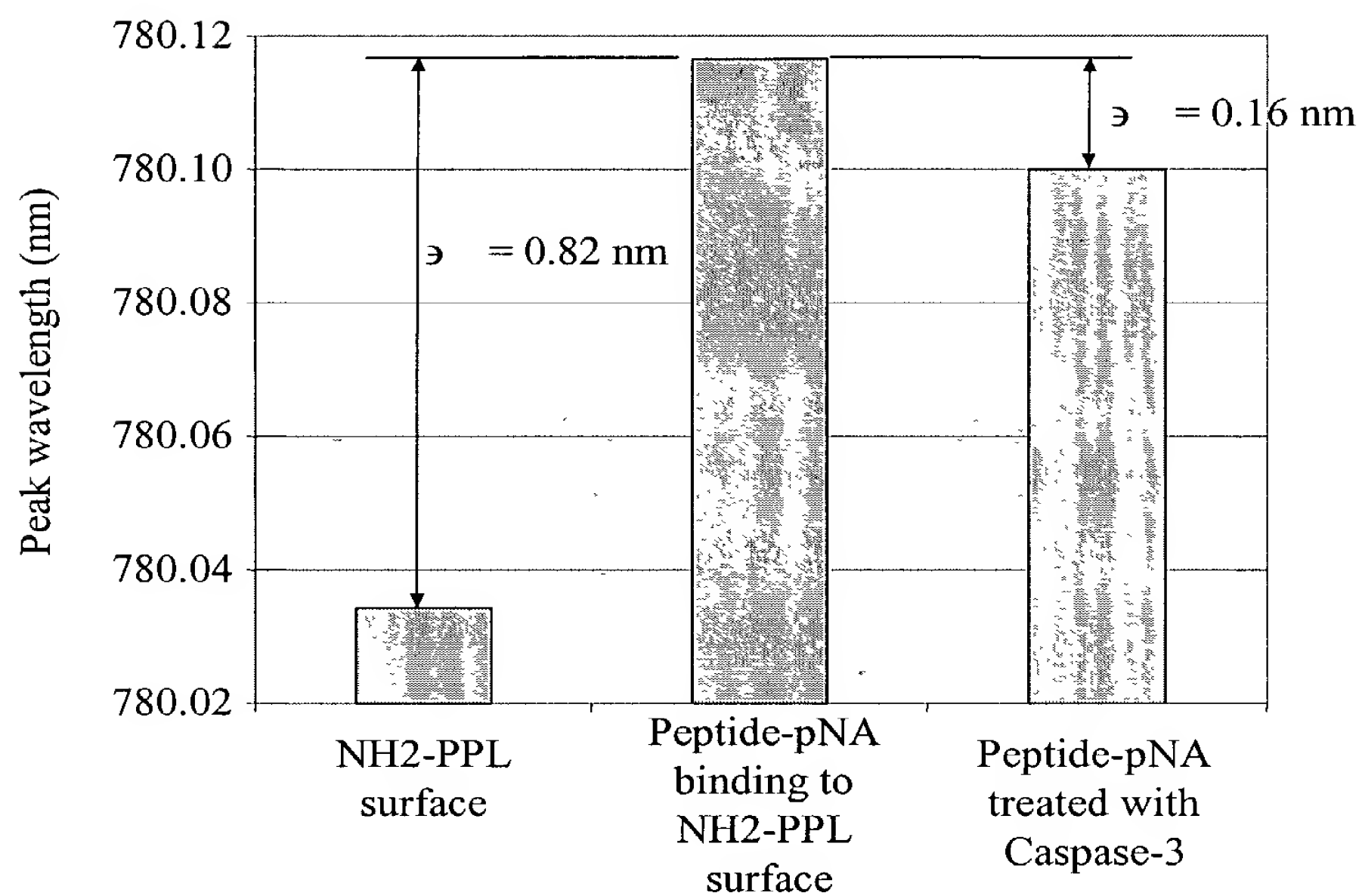


Figure 41 A

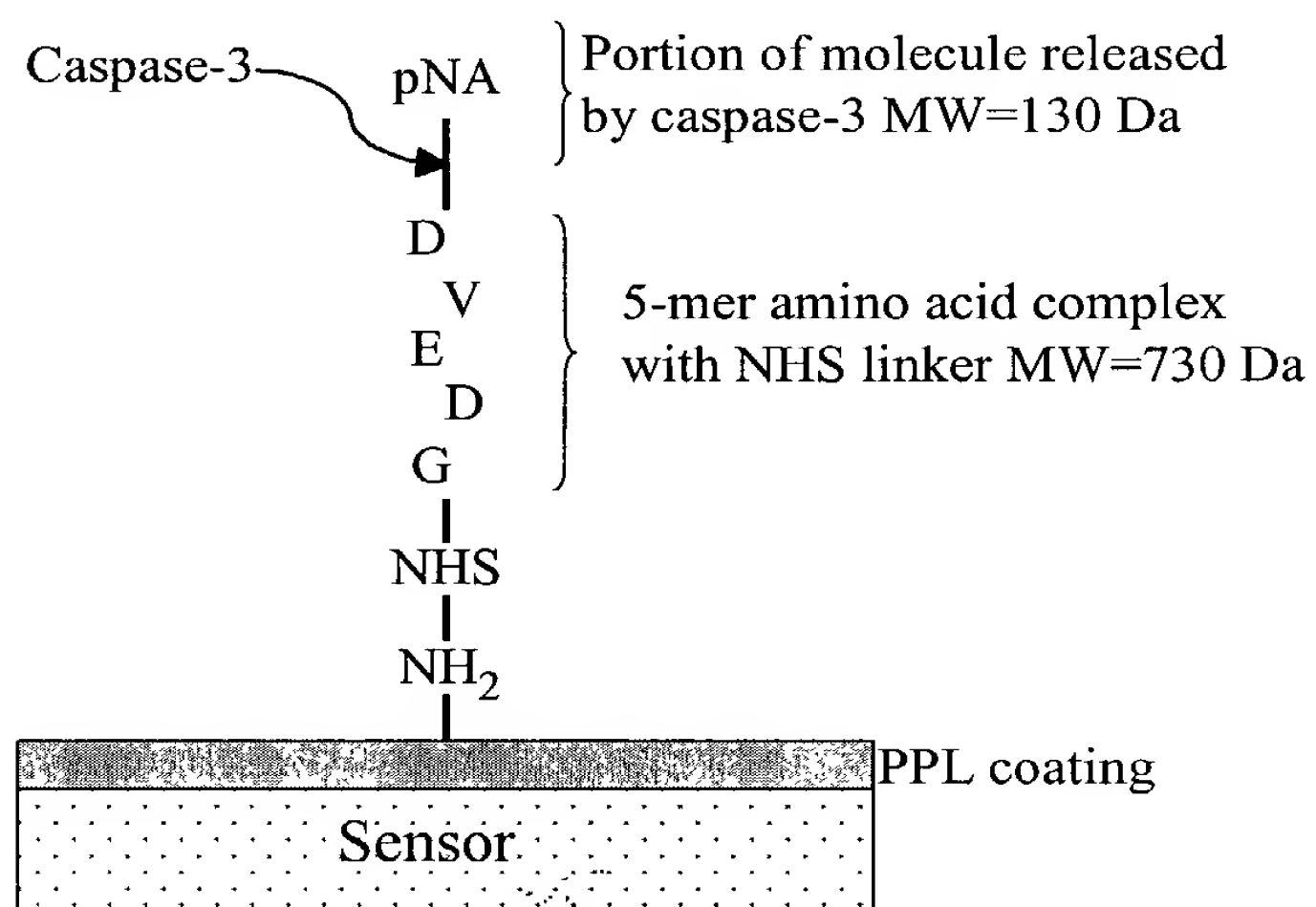


Figure 41B

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Measured shifting of the resonant wavelength caused by the binding of various biomolecular layers.

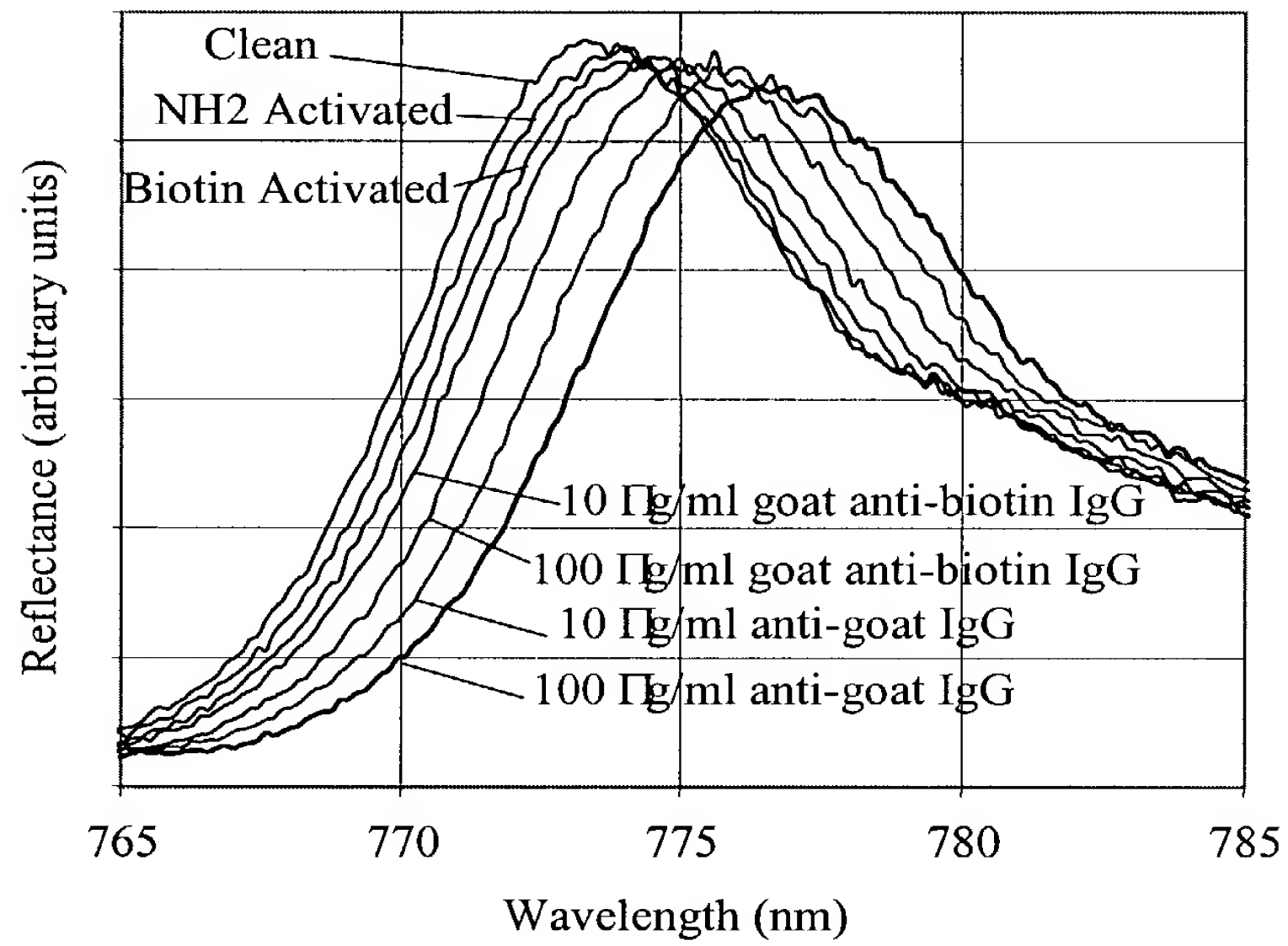


Figure 42A

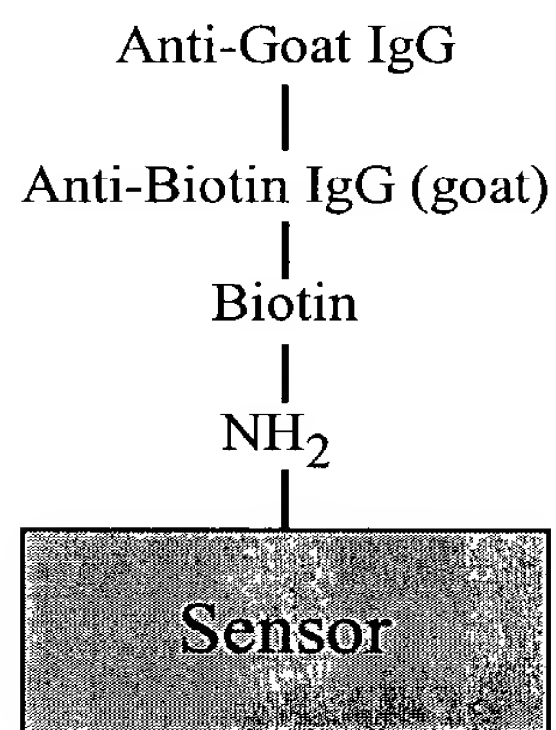


Figure 42B

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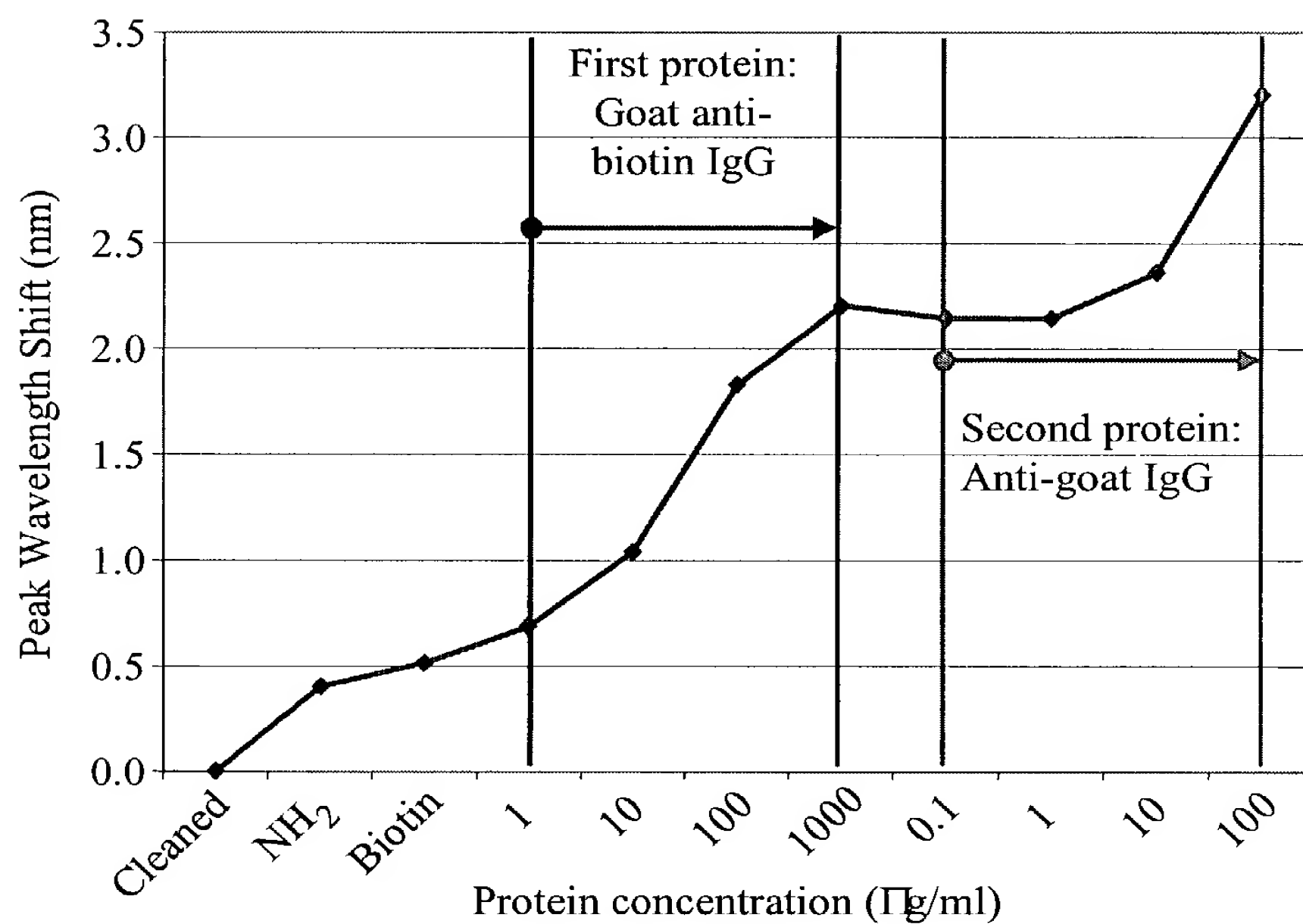


Figure 43A

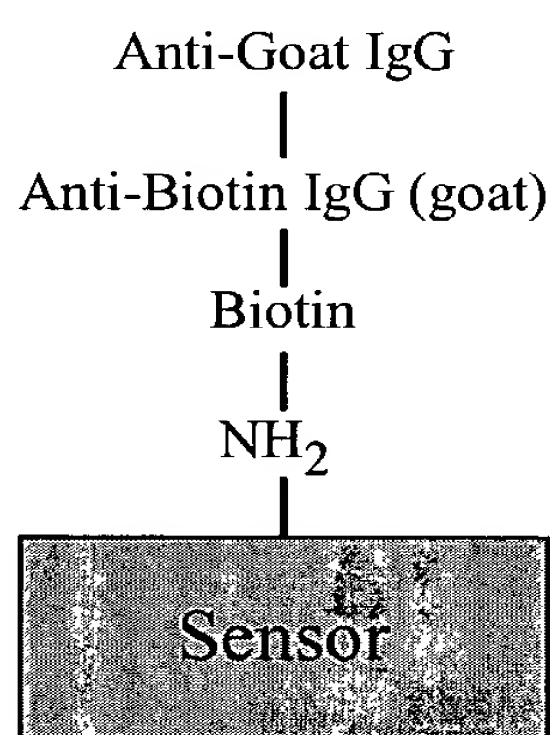
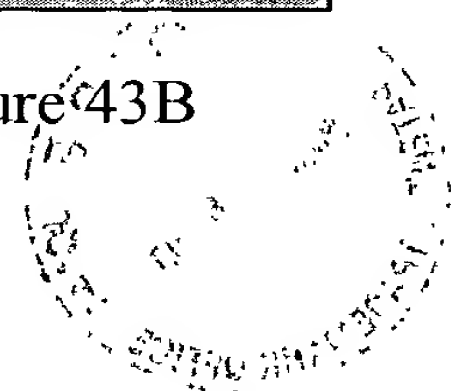


Figure 43B



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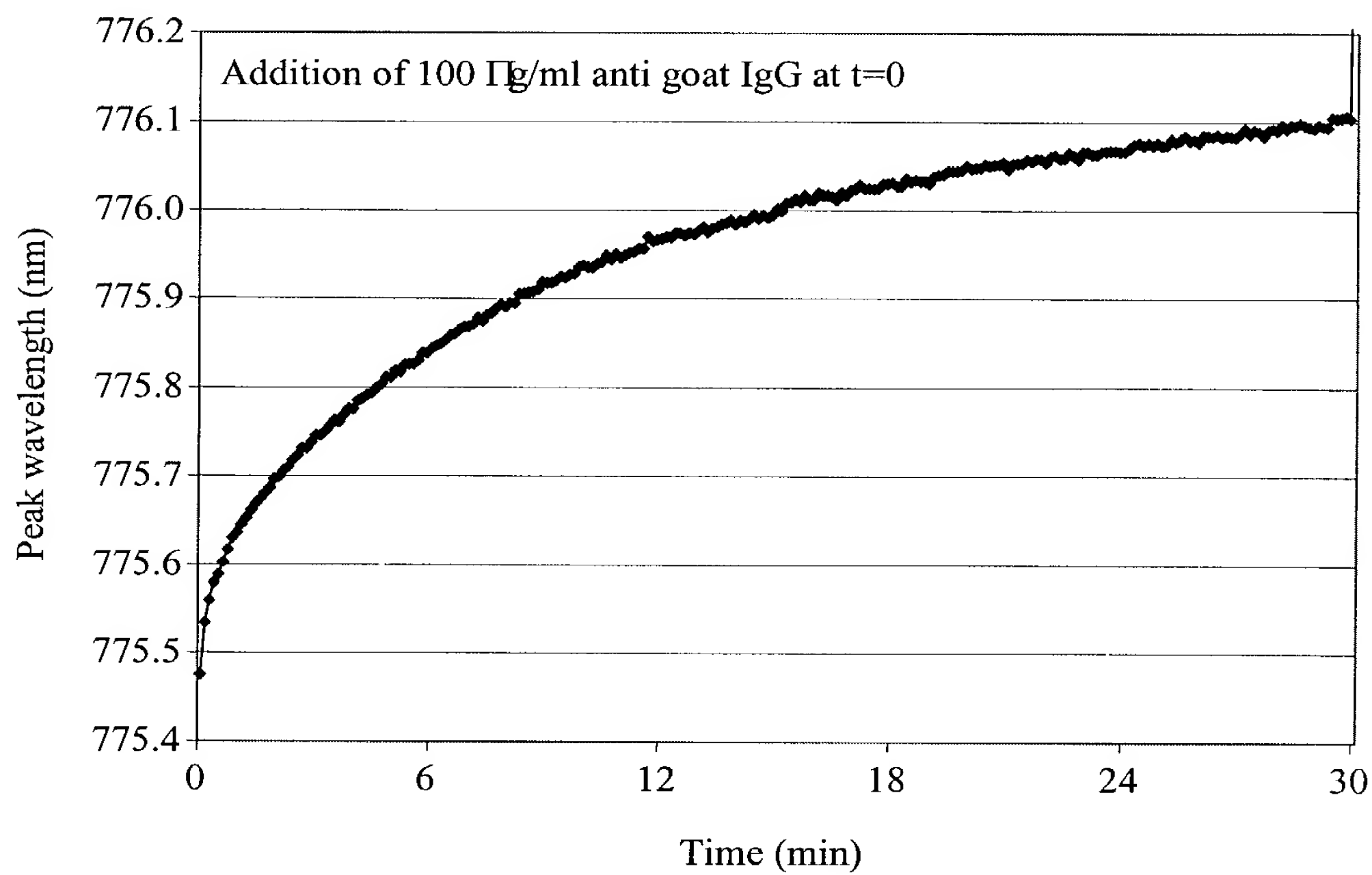


Figure 44A

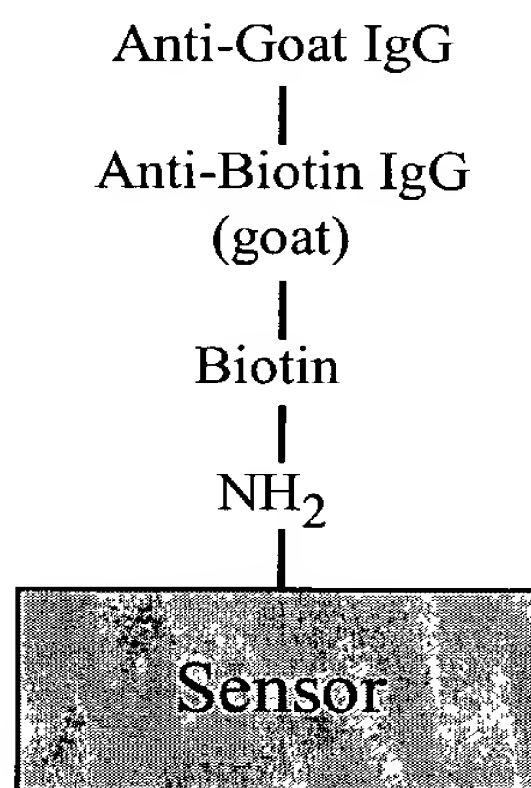
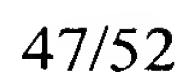
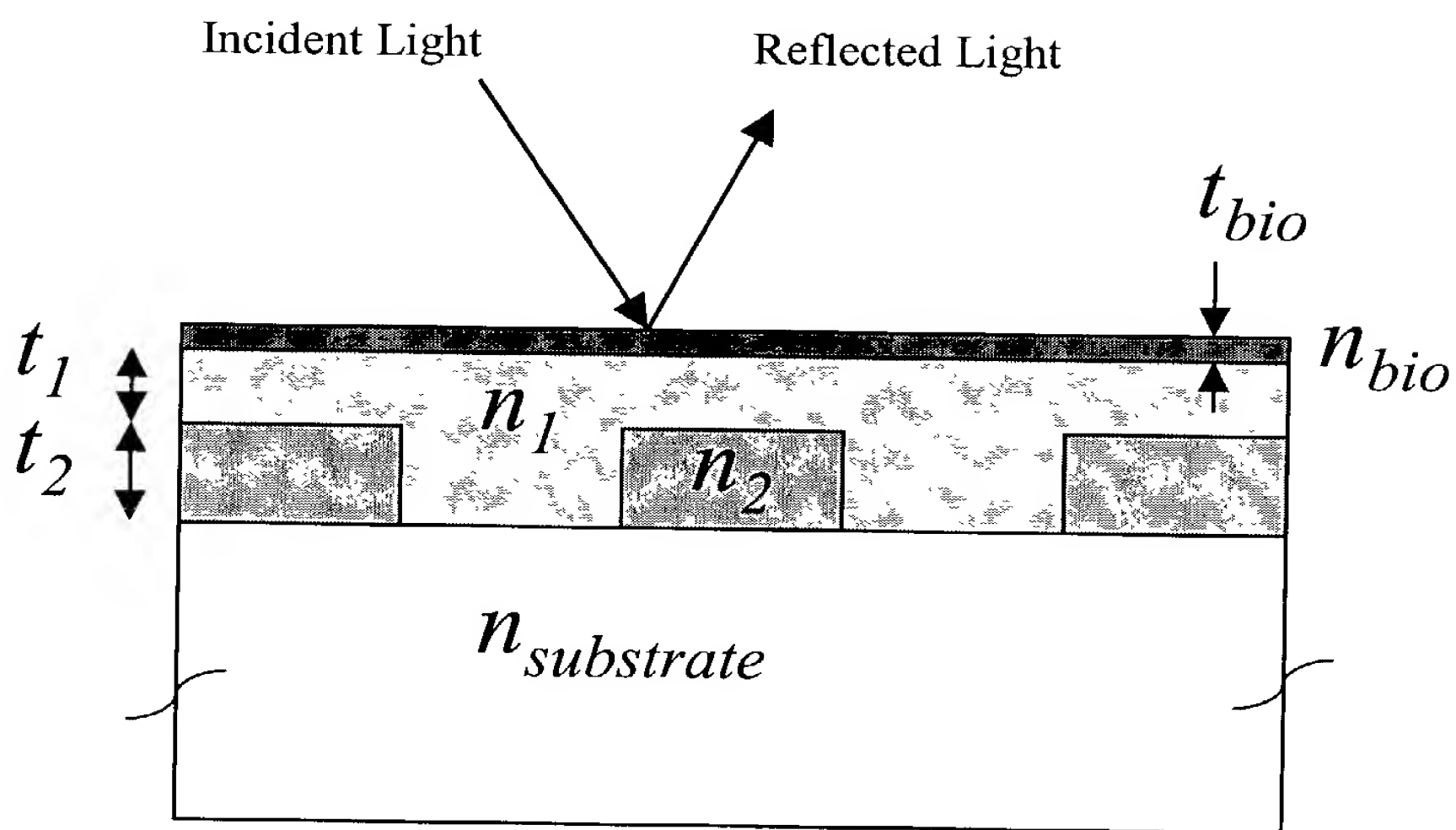


Figure 44B

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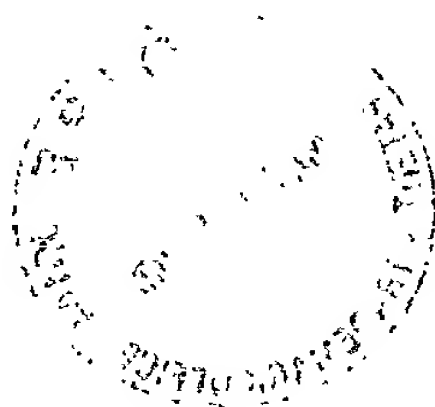


Material 1 = Electrical Insulator (photoresist, epoxy, glass)

Material 2 = Indium tin oxide conductor

Substrate = Glass

Figure 48



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Hexagonal Grid Design

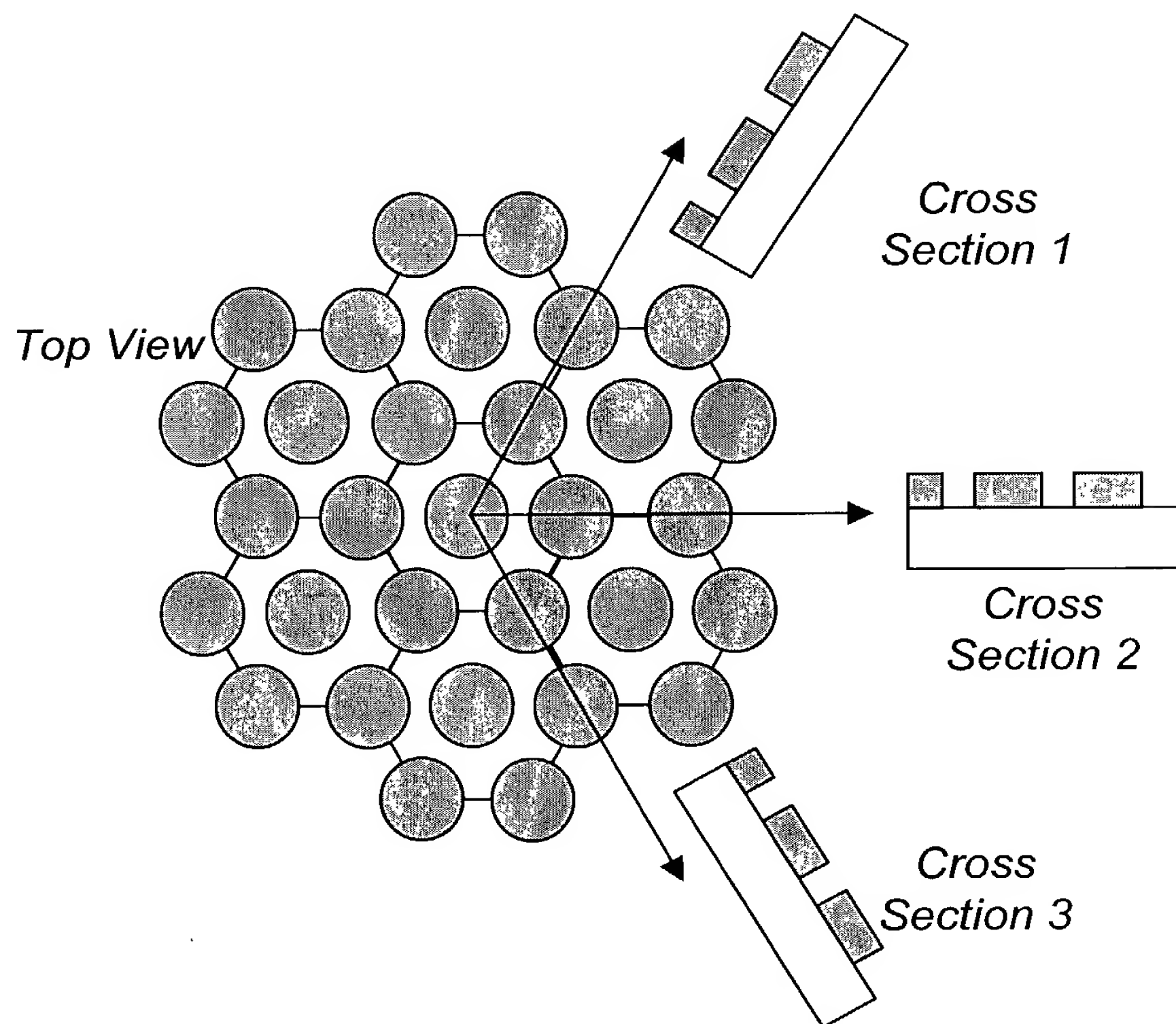


Figure 50



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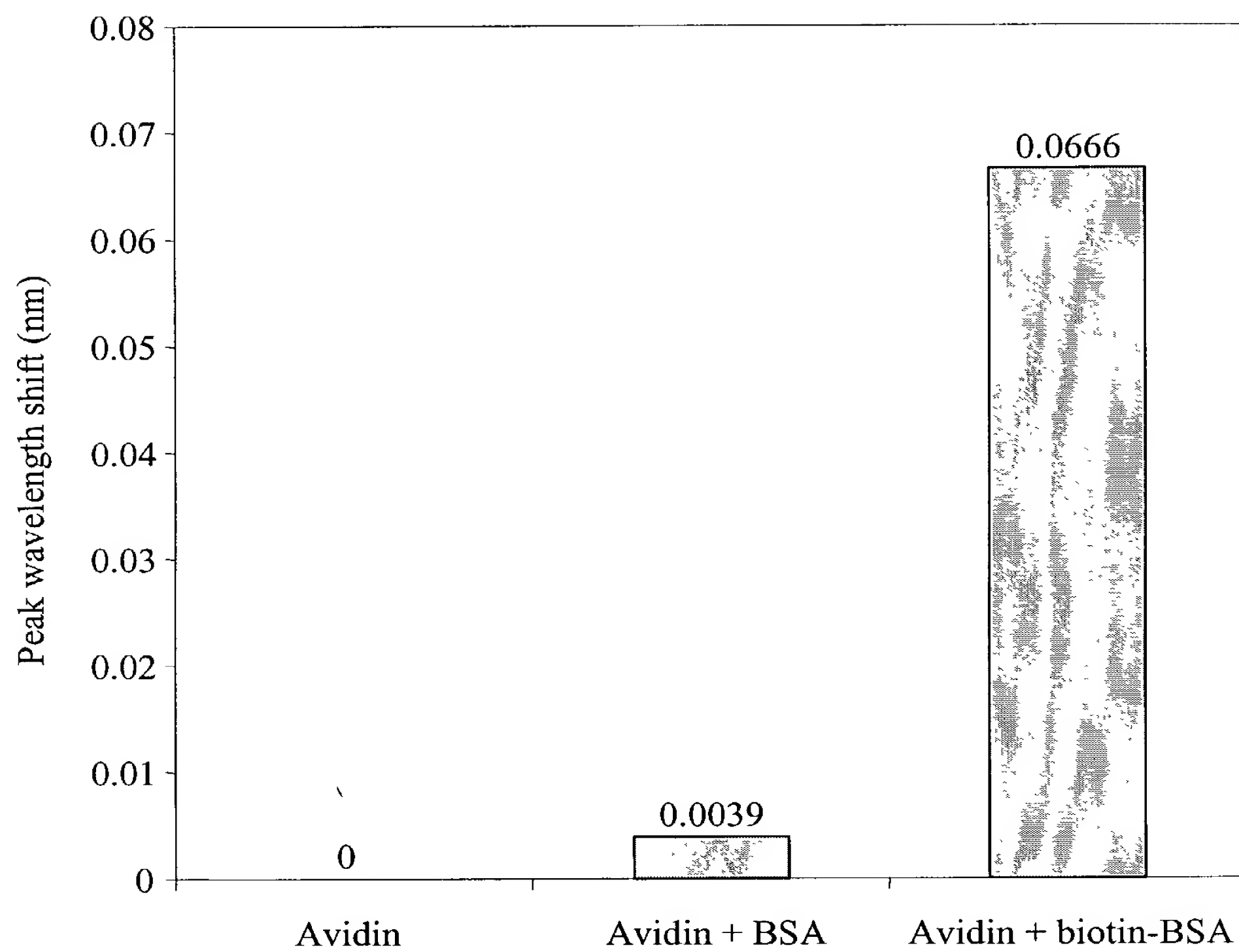


Figure 51

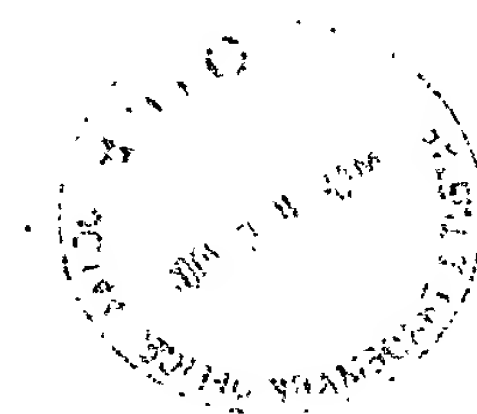




Figure 52